COUNTRY LIFE

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LADY NORAH BRASSEY.

COUNTRY LIFE

THE Journal for all interested in
Country Life and Country Pursuits

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ARGENTINE CATTLE . . AND ALDERNEY.

ALL who have at heart the interests of the immense cattle-producing trade of this country ought to raise their voice in protest against the scheme which has been enunciated for landing cattle from the Argentine in Alderney, and there slaughtering them for transmission to the English ports. One can easily understand the objects of those who are promoting it. For some time past the importation to this country of live cattle from the Argentine has been prohibited on the sufficient ground that foot and mouth disease has been and continues to be prevalent in the Republic. It has occurred, then, to certain financiers that this regulation might be evaded by landing the cattle at Alderney. Of course, it has been possible to make up a very alluring story for the benefit of the islander. According to a correspondent in *The Times*, the proposal is that the Alderney farmers should receive £1 per annum for every head of cattle they possess. Then the States would be given £10,000 which they could retain and invest for the purpose of recouping those who suffered from any outbreak of foot and mouth disease. A considerable gang of men would be required, and the prospect is held out that lucrative employment would be found for everyone on the island, as the company would be prepared to spend from £35,000 to £40,000 a year. Purveyors in the island would prosper by supplying the large steamers used in the trade with provisions. The States would probably gain in revenue some £5,000 a year, and even the British Treasury would put money in its pocket. Such are the very fascinating statements by which it is endeavoured to win the islands over to this scheme, but it does not require much consideration to see that far greater issues are involved, particularly to this country. Our farmers find that one of the most lucrative branches of their industry is that of raising pedigree live stock, which are sent to all parts of the world. But it is evident that an essential to the continuation of this state of things is the absence of any suspicion of disease. That is our point of view, but it must be that of the islanders also. The Jersey herds of Great Britain are continually being recruited from the islands; but if it became known that animals sufferings from foot and mouth disease were being landed in Alderney, no breeder from Great Britain would dare to import Jersey cows.

It may be argued that if the abattoirs were confined to one island they could scarcely affect another. But we are afraid that the group could only be considered as one country. The islanders are closely connected with each other, and are continually faring to and fro. So that a disease so easily communicated would be certain to be carried from one to another. Such an occurrence would be a serious blow to the Channel Islands, since many thousands of their cattle are imported by us annually. The whole trade, with their famous and beautiful breed, would be ruined for ever. Nor would it be possible to open new ground. Breeders in Canada are as jealous to guard their herds from disease as we are in this country; indeed, some of their regulations err, if at all, on the side of over-strictness. Thus what was gained in one way would certainly be lost in another. The question then is how far would the consumers derive advantage from the proposed arrangement. It does not appear that they would do so at all. The best imported beef brought into England is that which is killed in the United States and sent us in a chilled condition. On its merits it will often command prices in the market equal to those paid for the best Scotch beef. That is the most economical and convenient method of transport. It is simply impossible that animals which have made a long sea voyage, often under conditions distinctly unfavourable to their health, when killed on landing can supply beef equal to that which would have been obtained from them if slaughtered at the port of departure. The difficulty, of course, lies in the long distance. Chilled beef from the River Plate is, as the writer says, "two or three days too long on the way to land in perfect condition for distribution in the ordinary course of business." In consequence of this the profits of the companies engaged in it have either been reduced or have faded away altogether. But the remedy would seem to be a plain one. It is to go to the expense of building a swifter type of ship so as to bring the meat more expeditiously to market. Were that done, there is no doubt that a very high class of beef could be imported from the Argentine. No country in the world has made greater strides during recent years, and our own columns afford abundant evidence that the farmers grudge no price in order that they may possess the very best foundation stock in the world. Only a week or two ago we recorded the purchase of a sheep for the sum of 1,450 guineas; and it would be difficult to enumerate the number of bulls that have gone to the Argentine for sums of from 500 guineas to 2,000 guineas. They have, therefore, the blood, and they possess a magnificent soil, so that in time they may be expected to produce beef excelled in quality by no other in the world. But to send the cattle over to Alderney and slaughter them there is to surrender this great advantage. It has been pointed out, too, that the dead meat trade, in addition to being the more natural and the least costly, is also by far the most humane method of dealing with the live-stock of distant countries. No method has yet been discovered of transporting cattle without cruelty.

The main difficulty arises from the fact that Alderney in this matter stands very much in the position of an independent state. It would not be according to precedent if we rudely interfered and commanded the state not to accept the offer made it. All that can be done is to represent to them the injury they are likely to inflict on themselves, and to appeal to their reason, and, we may add, to their enlightened appreciation of self interests. The whole question is at present being considered by two Departments of the Home Government, the Home Office and the Board of Agriculture and Fisheries. No doubt steps will be taken to guard the livestock of Great Britain from any danger that may be threatening. But should the state of Alderney agree to accept the offer coming from the Argentine the damage to their herds would be irretrievable. Under the circumstances then it devolves on all whose interests are at stake to do by word or act their utmost to prevent this scheme from being carried out. It would serve no useful purpose beyond that of perhaps earning considerable but temporary dividends for the companies engaged in the traffic.

Our Portrait Illustration.

OUR frontispiece this week is a portrait of Lady Norah Brassey. Lady Norah is a sister of the Earl of Donoughmore, and her marriage to Captain Harold Brassey, Royal Horse Guards, son of the late Mr. Henry Brassey of Preston Hall in Kent, took place at Holy Trinity Church, Sloane Square, on Wednesday, July 25th.

*** It is particularly requested that no permissions to photograph houses, gardens, or livestock on behalf of* COUNTRY LIFE *be granted except when direct application is made from the offices of the paper. When such requests are received, the Editor would esteem the kindness of readers if they would forward the correspondence at once to him.*

COUNTRY NOTES

A CURIOUS and suggestive remark was made by Sir Trevor Lawrence at the conversazione in the Royal Horticultural Hall on Monday night. Speaking in regard to the advisability of encouraging research in the study of heredity and the practice of hybridisation (concerning which Professor Boulger contributes an instructive article, which will be found on another page of this paper), he said that he did not "think there was a single member of the present House of Commons whose opinion on any scientific subject was worth a snap of the fingers." Even though there be a certain amount of exaggeration in this statement, it certainly contains as much truth as entitles it to attention. Both in agriculture and in horticulture scientific progress is left too much to private enterprise. In the House of Commons almost everything is represented except science. Labour has its legion of representatives, so has law, so has commerce, and so have various other interests, but there is no constituency which returns a man chiefly because of his scientific attainments, or in order that he may encourage scientific enterprise. Yet in nearly every branch of activity the discoveries of science are opening up new and more economical methods of production, and we cannot help thinking that Sir Trevor Lawrence has placed his finger on a decided flaw in the constitution of the present House of Commons. His words would not have been quite so true when Sir John Lubbock sat in the Lower House, but when he received the title of Lord Avebury there was no one on whom it could be said that his mantle had fallen.

It is curious, when one crosses the Channel, from England to France, or *vice versâ*, to notice the difference in the agricultural aspect of the land on the one side and on the other of that narrow stretch of sea. In a year such as the present, in the last week of July, the farmers of Kent still had some of their hay on the ground, not yet harvested. On the other side of the Channel, directly you got into the country about Boulogne, you would find barley harvest in full swing, and even the wheat showing golden sign of ripening. Searching for the reason, it certainly is not to be found in any less rigorous conditions of winter climate. France, even in that northern department, perhaps may enjoy a little more sunshine, but one is forced to the conclusion that the real root of the matter is in that wonderfully fertile soil of France, which seems to need only a little scratching to make it give its fruits in abundance. It is to be said also that it receives much more than a little scratching, in the way of tillage, at the hands of the industrious peasant proprietors, and that their methods are fully equal to those in vogue on our side of the silver streak, even if they are not a little superior.

It will be a considerable comfort to a good many people to read the report, published by Lord Strathcona, of the Commission appointed by the Minister of Fisheries and Marine at Ottawa to inspect the salmon canneries in British Columbia. "Without exception," the report of the Commissioners reads, "we found the sanitary conditions satisfactory. The salmon being packed were fresh from the cold waters of the Pacific, and were placed in the cans in absolutely fresh condition and in the most cleanly manner. We have no cause for complaints." There is more of the same tenor, and, on the whole, it is to be doubted whether any other report of any Commission of the kind has ever been quite so emphatic and unqualified in its expressions of satisfaction. A great many people make a rule of admitting no canned salmon into their kitchens, and may or may not be wise in taking such precautions; but, however careful they may be in their own houses, they may be quite certain that they will meet with the canned fish in the made-up dishes at restaurants, if not at some of their friends' private houses; and, since the unpleasant disclosure from Chicago, this reassurance from British Columbia is welcome.

The Sydney correspondent of a contemporary has sent home an extraordinarily interesting account of the new form which the rabbit controversy has taken in Australia. Formerly it seemed as though the entire energy of those connected with it was concentrated on devising means for extirpating an animal which had become a very great pest. At enormous expense wire-netting was furnished by the State, plans and devices of various kinds were found for poisoning or otherwise destroying the vermin, and it seemed as though the saviour of Australia would be he who found out an efficacious rabbit bane. Science was eventually called into requisition, and from the Pasteur Institute has come an offer of a bacteriological remedy which, if used, would cause a deadly plague among rabbits. While all this argument was going on in the Press rabbit-catchers had literally been living in clover. Owing to the invention of cold storage and other means of transporting dead meat, a trade had grown up in rabbits. The skins, too, were found to be of value to such as manufactured hats, silk hats, for instance, being partly made out of rabbit down.

Thus the scheme for clearing off the rabbits by bacteriological methods has met with considerable opposition. The rabbit-catchers see in the employment of Pasteurella the destruction of a valuable property, and they have cunningly endeavoured to represent that if the plague be disseminated among the rabbits in this way, no other livestock will be secure, and Australian trade will receive incalculable injury. The Australian Government inspects food products sent abroad under cold storage, and ruthlessly condemns what is tainted. On this side of the water there is another examination, and an equally sweeping condemnation of whatever appears unfit for food. It is evident that if the new virus were employed in Australia the whole commerce in dead rabbits would come under suspicion. Not only so, but there could be no guarantee that sheep and other livestock would be immune. There is, however, a division of opinion, one party wishing to destroy the rabbits, and another to preserve them. The difficulty ought to be settled by an appeal to statistics. If the trade be in reality growing and lucrative, it would not seem to be very wise to put an end to it by means that cannot be employed without a certain amount of danger.

ON AN ENGLISH LAWN.

Home again to an English lawn
And the daisies fed with the dews of dawn!—
Of this have we dreamed in the tropic nights
When the stars were flowers of fire,
And this was the stage of our lost delights
In the Hall of our Last Desire—
The cheery tinkle in tilted glasses
Out here on an English lawn,
The swish of feet in the trim green grasses
Soft as the feet of a fawn,
The light-flung shadows of English beeches,
The low-toned laughter of English girls
With cheeks like peaches and teeth like pearls—
The witching laughter of English girls!

WILLIAM OGILVIE.

Those newspaper writers who seemed to think that, because an outbreak of lawlessness did not follow the dissolution of the Duma, therefore no revolution would occur, are in the way of being undeceived. The previous history of revolutionary movements has shown that progress with them is very slow; and it is but natural that it should be slower still in our time. Before the invention of the present weapons of precision, a crowd could arm itself nearly as well as the soldiery; but the quick-firing gun has changed all that. A very small regiment possessed of these weapons could overawe an immense crowd of revolutionaries. Hence it is impossible for the Democratic Party in Russia to do anything until they can detach the soldiers and sailors from their allegiance. This lies at the bottom of the appeal that has been made by the Labour Group and the Social Democratic fractions of the Duma to those who serve under the military and naval authorities. On the success or failure of the appeal future history will depend; but it is noteworthy that those who have drawn up the document state in positive terms that the Ministers of the Czar have arranged to obtain help from Austria and Germany in order to overawe the insurrection. This in itself is calculated to inflame the minds of those of the Czar's subjects who are already disaffected.

In *Blackwood's Magazine* for August there is an interesting article on crofters past and present, which will be read with attention by those interested either in the Land Tenure Bill or in the extension of small holdings. The writer is wholly in favour of retaining the crofters as an asset of the nation, but he is of the opinion that fixity of tenure would in the end prove detrimental to their interests. At present when the usual nineteen years' lease has expired anumber of crofts fall vacant, and those whose legitimate ambition it is to become farmers on a large scale take them. But the writer is of the opinion that fixity of tenure will stop all healthy movement of this sort. "Old crofts," he says, "will not be available, as their owners will not leave, and the formation of new crofts has been shown to be too expensive." It is a point well worthy of consideration, because experience has shown that Acts of Parliament often produce effects that are in no wise expected.

The big Irish salmon we chronicled in our pages on February 24th is quite eclipsed by the weight of one which Mr. Ffennell recorded in a contemporary on Tuesday last. It was caught in the nets near Aberdeen, and weighed 56lb., length 53in., girth 31in., and is, it is believed, the heaviest fish of the present season in these islands, though some 4lb. less than the record one for 1905, which was also taken in the Dee and Don district. The rivers in England and Wales where the average weight runs high—the Tyne and the Wye—are not likely to produce anything that will beat this, but till the season ends on Tweed and Tay it would be unsafe to hazard any prophecy that Scotland will not better her own record; only let us hope that if she does such a kingly fish will meet a fate more worthy of him, namely, that at the hands of a wielder of the rod and line.

Seldom has the contest for the cricket championship for the English counties been watched with such eager attention as has been the case this year. Probably this is owing in some degree to the absence of any distraction in the shape of an Australian team, but no doubt it is also due to the closeness of the competitors. Yorkshire, the present holders, Surrey and Kent are running neck and neck, and at present it would not be safe to prophesy which will be the ultimate victor, though at the time of writing the odds are in favour of Surrey. This county, which for some years past has scarcely been able to do itself justice, has, under the captaincy of Lord Dalmeny, once more asserted its claim to be, if not the very first, at least in the first flight. Two men have greatly conduced to this end. Hayward in no previous season has batted more consistently. His name stands first in the list of averages, and there is a considerable distance between his and the second.

The other member of the team who has contributed in a conspicuous manner to the success of Surrey is the young bowler, Mr. Knox. His extraordinary pace had a demoralising effect even on the Yorkshire veterans when they had to face his bowling at the Oval. The Northern cricketers, after a bad beginning, made a characteristically plucky attempt to recover position in the second innings. Hirst and Lord Hawke, under most disheartening circumstances, made a very gallant stand, but it was all in vain. The Surrey team, on their own ground, for once quite outplayed their formidable opponents, and the immense crowd, numbering close on 30,000, had the opportunity of watching a fine struggle, in which the home team uniformly had the upper hand. It must be said, as a tribute to the fairness of a London crowd, that, while watching the game with the closest attention, they were as ready to mark and cheer good cricket on the part of the Yorkshire team as they were to recognise the achievements of the side that they obviously wished to win. The match is likely to become historical, and the result will lend increased interest to the return match which is to be played in Yorkshire during August.

This week Yorkshire came very near creating a record when they got the whole of the Worcestershire side out for a total of 25 runs. In a first-class match the lowest previous total was 12 by Oxford University against the M.C.C. and Ground at Oxford in May, 1877. In a first-class county match, the lowest aggregate recorded is that of Nottinghamshire against Yorkshire in June, 1901, when the "lambs" were dismissed for 13. Thus there have been several totals less than that made by Worcestershire on Monday and Tuesday. But, nevertheless, it would appear that Yorkshire, after their defeat by Surrey on Saturday, underwent a sudden return of form and began to play again in their old invincible style.

English people very often take kindly to a man who scolds them well, and this seems to be the case with Father Vaughan, whose sermons have recently been exciting a good deal of attention. But those who look on society from a proper perspective will scarcely care to endorse his sweeping remarks. It may be quite true that men and women gamble to-day more than is good for them. They do not gamble nearly so much as did the bucks and dandies in the days of the Regency. To run about in a motor-car may not be a highly intellectual form of enjoyment, but it is much more healthy than were the pastimes of the grandfathers of the present generation in the days of King William IV. Even the comparatively poor and the middle classes, who assemble in their thousands to watch what Mr. Rudyard Kipling called "the flannelled fools at the wicket," spend their time much more intelligently in doing that than did their forefathers when they devoted their leisure to the tavern and skittle-alley. There are very few directions indeed in which public manners and morals have not greatly improved during the last half or three-quarters of a century.

OTTER-HUNTING IN RIBBLESDALE.

AIR: "BONNIE DUNDEE."

Through yon little planting, by yonder streamside,
Where Ribble's sweet waters flow softly and wide,
While the dew's on the meadows it's up and away
A-hunting the otter at break of the day!

CHORUS:

Come rise up full soon, come rise up and go!
The mist's on the hill and the river runs low:
When the dew's on the meadows it's up and away
A-hunting the otter at break of the day!

O hear the glad music of horn and of hound!
O hear how they welcome in day with the sound!
O hear how the valley is loud with the strain,
And the woodlands give answer with echo again!

Now Ribble, sun-chequered, slides joyfully down,
Which late through the bridges roared foaming and brown—
Now hot lies the scent and the morning is still—
Hark for'ard good hounds, to a view and a kill!

A health to good-fellowship fill we now high,
You true-hearted sportsmen from Eden and Wye!
Here's many a good chase when the morning is grey,
A-hunting the otter at break of the day!

C. FOX SMITH.

Of the comedian it may, indeed, be truly said that his fame is writ in water. His work depends upon his personality, and it is difficult for even a contemporary, who loved the late Mr. J. L. Toole at his best, to recall the exquisite character of his humour. The present writer remembers one occasion, many years ago now, when he had the pleasure of sitting for the first time by the side of Mr. Toole at dinner. The comedian was in his highest glee, full of drollery, of wit, and of anecdote, literally like poor Yorick, who set the table in a roar, and who might be given the same epitaph, "We might have better spared a better man," except for the fact that a better man is scarcely imaginable. In private life Toole was, as an intimate called him, "a miniature goodness," a man of the most unbounded kindness and generosity. Few private individuals appealed in vain to him for help, and it was his greatest delight to perform for the aid of public charities and institutions. He was the noblest and most constant of friends, as witness his long attachment to Irving, and he was also the most delightful, as his humour off the stage was as inexhaustible as it was on.

One remembers Toole best entering the stage with the catch-word of Paul Pry, "I hope I don't intrude"; but in his time he played many parts, and to cast an eye over his long life is to see a laughing vista of English comedy. He was a Londoner of the Londoners, his father having been Toastmaster of the City of London; and he was born as long ago as 1832. He began life as clerk in a wine merchant's office, and it was during that time that he developed his love of the stage. The first time he played in a regular way was in 1852 at Ipswich, when he assumed the part of Sylvester Daggerwood; but very soon the reputation he was making in the provinces reached the capital, and he was invited to London by Charles Dillon. Until the end of his life, however, he remained a familiar figure on the stage of various provincial towns—Edinburgh, Glasgow, Liverpool, Manchester, and the like, where his appearance was invariably greeted by such bursts of cheering as welcomed few actors. It was in Edinburgh that he formed his memorable friendship with Irving, whom he induced to come to London, and henceforth Irving and Toole were names frequently coupled together as those who were at the top of different branches of the same profession. Though his career was one unbroken series of artistic triumphs, the smile of the comedian was often used to cover a heart torn by private anguish. The death of his promising young son was the first severe blow Fate dealt him, but it was followed by others, and sorrow as well as disease shed a gloom over his declining years.

A curious and beautiful optical delusion is furnished by some of the lavender gardens and fields in East Kent. Growing low

as they do almost on the water levels of the Kentish Stour, that famous but placid river which is the home of the abnormal salmon known as the Fordwich trout, you would swear, as you viewed the field from a distance, that you were looking at a stretch of water, a lagoon or backwater of the river. At the distance the mauve tint of the lavender is lost, and the level surface seems all of the silvery grey hue of the stream. Coming a little nearer, a strange glow and warmth appears to gain on the silvery grey, and you see the field as it really is, quite indescribably beautiful in the delicacy of its hue, which is only to be matched in Nature by the tint of the sea-lavender on some of the marshes on the coast.

After a season's tennis of more than common interest we are brought to the conviction that we have no other English amateur player who is at all equal to Mr. Miles. Major Cooper-Key, after playing finely through the earlier heats at Lord's and beating Mr. Crawley in the hard fight for the silver prize, failed entirely when he had to encounter Mr. Miles for the gold prize. The result of the season's play has also been to confirm the impression that the first amateur conqueror of Mr. Miles will be Mr. Jay Gould. A comparison of the results of their respective matches with the professionals leads to this view, as well as the result of the match in which Mr. Miles beat Mr. Gould. Mr. Gould has shown a tennis-playing power such as it is quite certain has not been shown by any other amateur at his age. It is not only because he has youth on his side, which even against a player of Mr. Miles's quite wonderful activity in the court (in spite also, shall we say, of the latter's dietary principles, which he justifies so finely in his athletic work?) must begin to tell in a year or so, that we are obliged to make the prediction that the latter will find his conqueror in Mr. Gould, but also because the gaps in Mr. Gould's game, formidable though it already is, are so obvious and should be so easily filled. When they are filled he will be, in his national language, "a terror."

THE ONLY TUNE.

(A VILLANELLE.)

The only tune that he could play—
He learned it long and long ago—
Was "Over the Hills and Far Away."

We young folk, listening day by day
As fared he, piping to and fro
The only tune that he could play,

Half weary heard: could none soothsay
How not till all life's fairest show
Was over the hills and far away

Time's hunter-years their chase would stay
Mid harried fields; and none might know
The only tune that he could play

For just a joyful summons, yea,
To journey where the path we'd go
Was over the hills and far away

From worlds grown dreary. Ah, 'tis gay
Would sound one piper's call, if so
The only tune that he could play
Was "Over the Hills and Far Away."

JANE BARLOW.

THE LIBRARY, MERTON COLLEGE, OXFORD.

IT is the boast of the two older Universities of this country that they possess many ancient libraries—rooms in which study has been carried on without interruption from the fifteenth century to the present time—but among these the first place must unquestionably be assigned to the library of Merton College—the "house-of-scholars" as it was termed, with which Walter de Merton, sometime Chancellor of England and Bishop of Rochester, inaugurated the collegiate system in 1264. It must not, however, be supposed that we have in this library a relic of Merton's own time. His educational scheme did not include a series of buildings—more or less magnificent—disposed round a quadrangle in the way with which we are so familiar, and which we regard as inseparable from the collegiate system. In his day, and for a long while afterwards, the system was on its trial. It was a novelty, and no one knew whether it would be a success or a failure. Hence the founders of the first colleges set to work in an economical and tentative fashion. They bought a site in a suitable situation, as near to a parish church as possible, and they placed their beneficiaries in one of the houses already standing on the ground. These persons—who were teachers, it must be remembered, not scholars—were few in number, with wants that were easily satisfied. Their principal requirement was a large room in which they could take their meals and, perhaps, occasionally deliver a lecture, for the parish church did duty as a chapel; their money was kept in one chest, and their books in another, both carefully secured by locks which required the presence of more than one member of the society to open. Books were scarce in the thirteenth and fourteenth centuries, and as valuable as plate. In the lists of "cautions"—that is, pledges which students were allowed to deposit with the University as security for fees—books, that is, manuscripts, figure as frequently as spoons or drinking-cups. Gradually, as years went on, and the collegiate system was accepted, chapels, halls, libraries, and other edifices specially required for the collegiate life, took their place in the quadrangles, round which, in an order copied from the manor houses, not from the monasteries, the buildings of the new institutions were grouped.

In Merton's College, as elsewhere, the permanent buildings arose very gradually, and Merton himself, who died in 1277, saw none of them. The quadrangle on the south side of the choir of the chapel, known as "Mob Quadrangle," on the first floor of which the library is situated, is of uncertain date; but it is at least probable that the north and east sides were built in, or soon after, 1311, and that the south and west sides were not completed until 1379. This later date rests on the sure foundation of the Bursar's account-book, which shows that in the three years 1377, 1378, and 1379 £450, contributed by various benefactors, was spent "on the new work of the library." If, however, the external walls of the quadrangle be examined, it will be seen that the wall below the first floor on those two sides is of earlier date than the portion above it. It is, therefore, probable that the whole quadrangle was set out when the east side was built, and was left unfinished for more than half a century, probably through lack of funds.

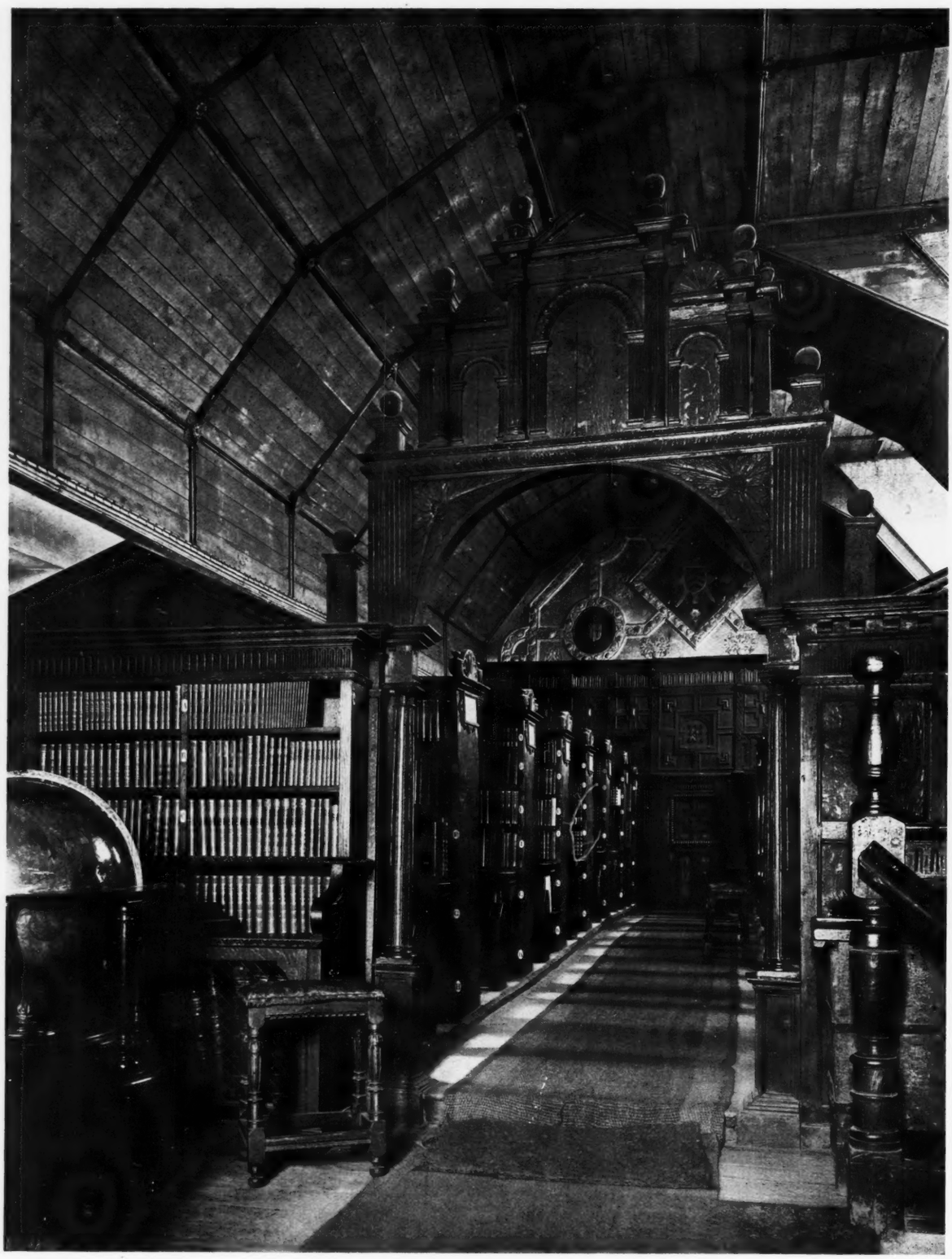
There is no reason to doubt that the library—so far as the stonework was concerned—was finished in 1379, and it is pleasant to be able to record that it has not been fundamentally altered since that date. Dormer windows have been contrived in the roof; some additional space has been obtained; the roof and the gables have been panelled; the bookcases have been remade on

a new and enlarged pattern; but the antique glamour of the place has not been disturbed, and when a visitor enters, and from the vestibule at the top of the stairs surveys first the west library (shown in the first of our illustrations) and then the south library, he will be able to realise the feelings of Leland when he visited the library at Glastonbury:

> I had hardly crossed the threshold when the mere sight of books remarkable for their vast antiquity filled me with awe, or I might almost say with bewilderment, so that for a moment I could not move a step forward.

Let us now examine the library more minutely. It occupies the whole of the first floor of the south side of the quadrangle, and the greater part of the same floor of the west side. It is entered through a doorway in the south-western angle of the court, whence a staircase leads up to the vestibule. This room is separated from the two divisions of the library by lofty screens of oak, elaborately carved and ornamented in the style of the early Renaissance. These two rooms have a uniform width of 20ft. The west room, called by tradition Old Library, is 38ft. long, the south room, or New Library, 50ft. long.

The Old Library is lighted by seven equidistant lancets in the west wall, and by the same number in the east wall. Further, on the side of the roof next to the court are two dormers of peculiar design. The south room is similarly lighted by ten lancets in the north wall, and as many in the south wall, and by two dormers similar to those in the west room. In the west room the windows looking into the quadrangle are glazed with what may be original glass. There is a general similarity of treatment, but considerable difference in detail. A border of



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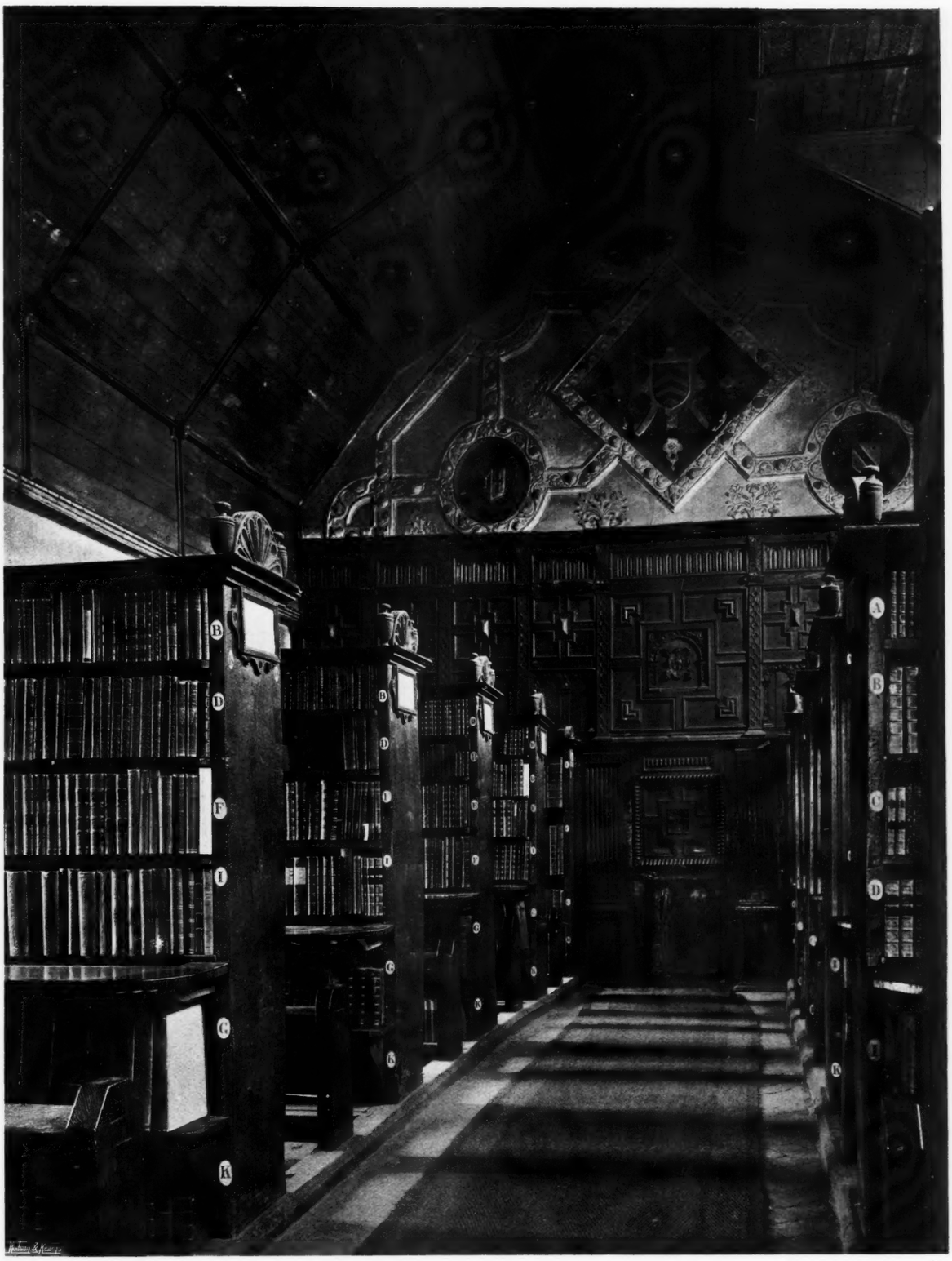
"COUNTRY LIFE."



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grapes (yellow) is carried round the light; within this are quarrels bearing patterns in yellow and black; and in a circle surrounded by a border of red and blue glass is an Agnus Dei or a dragon. The blank wall at the north end of the west room is panelled for a height of about 12ft. with oak of an elaborate and beautiful design. The space above this is decorated with panels of plaster-work. The large square central panel contains the arms of the college; the circular panel to the west those of Whitgift (Archbishop of Canterbury 1583-1604); and the similar panel to the east those of Sir Henry Savile (Warden 1585-1621). Both the rooms are floored with rough oak planking. On this are laid four sleepers, parallel with the side walls. The two central sleepers have their outside edge roughly chamfered. Into these sleepers the bookcases and the seats for the readers are mortised. The central alley, 5ft. wide, is in both rooms paved with encaustic tiles. In the west room there are six complete bookcases and two half-cases on each side, and in the south room ten complete cases and a single half-case similarly placed. The complete cases are set at right angles to the main walls, their ends occupying the greater part of the space between the windows, about 2ft. in width, while the bench for the reader, about 9in. wide, is similarly placed opposite to each window, in the centre of the interval between each pair of cases. Each case is about 7½ft. high, and 18in. wide. The material is oak, very coarse and rough. The ends of the cases are nearly 2in. thick, and next to the wall are shaped roughly with an adze.

When these cases were made—and their probable date will shortly be discussed—chaining was still in fashion. Each book

bore a chain and a ring, by which it was attached to a bar fixed in front of the shelf on which the book stood. When a reader wished to consult it, he had to come to it, not fetch it to his seat in another part of the library. It was necessary, therefore, to provide a desk as part of the bookcase; and such contrivances are still fixed to most of the cases at Merton, on one side, at least—each with a slit on the side next to the case, through which the chains passed while the book was being read. Each case had only two shelves—one just above the level of the desk, the second about halfway between it and the cornice. The scar left by the original attachment of this shelf can be readily detected, and some of the sockets through which the bar for the chains passed are still in their original position. Further, there would, of course, be no books beneath the lower of the two shelves. Instead of a row of books, a bar of wood, on which the reader could rest his feet, was provided. Each case bears a small oblong frame, just below the cornice, to contain the general titles of the books within the case. In the west room the titles are "LIBRI ARTIVM" and "CODICES M.SS."

Before we conclude, we will consider the dates to which the different portions of the fittings may be referred. The stonework of the library having been finished, as we have seen, in 1379, it is probable that it was at once used to contain books, and that these were chained to lecterns—the earliest shape of a bookcase in all parts of Europe. This conjecture is supported by two facts; first, that the wall space between each pair of windows does not exceed 2ft. (as is usual in libraries where lecterns are known to have existed); and secondly, that when the new cases were made, longer chains were bought. For a lectern, a short chain only was required, which usually played along a bar fixed at a few inches above the sloping portion. The walls were unplastered, the roof timbers were unprotected, and the only light available passed through the lancet windows of the first construction.

The first change was made in 1502-3, when the panel-work on the roof was put up, and the bosses at the intersections of the panels were painted. These still exist, and prove the ceiling to be that put up in 1503; for among the ornaments upon them are the Tudor Rose, the Dolphin of Fitz James (Warden 1483-1507), and the Royal Arms used from Henry IV. to Elizabeth, but altered by James I. In 1623 the south library was altered so extensively that it is subsequently referred to in the accounts as New Library (Nova Bibliotheca), and has been so designated in the college. The introduction of more light was evidently felt to be necessary, to effect which, not only were two dormer windows constructed, but a room at the east end was added to the library, thereby enabling the college to construct a new window of ten lights. At the same time, new bookcases were ordered; one Benet, a joiner, supplied twenty cases and one half-case, a number which shows us the library was entirely refitted, with the exception of a single case against the screen, at a cost of £42 18s., less £3 7s. 6d. allowed for the old cases. We know, therefore, the date of the cases in the New Library, and when they are compared with those in the west room it is difficult to trace any difference between the two sets. But, unfortunately, the accounts contain no reference to the cases in the west room, and we are therefore unable to say whether those in the south room were copied from them in 1623, or whether the reverse process took place at some now unknown date. The picturesque screens through which both libraries are entered from the vestibule may probably be dated 1606. The panel-work and plaster-work at the north end were executed in 1641. Savile's arms were selected as those of an eminent Warden, and Whitgift's because he had been Archbishop during his term of office.

In conclusion, I have to acknowledge my obligations to Bernard W. Henderson, M.A., formerly Fellow and Librarian of Merton College, whose laborious and accurate researches have thrown so much light on the history of the college, and especially on that of the library.

JOHN WILLIS CLARK.

POINTERS & SETTERS AT LANARK.

THE International Gun-Dog League brought off its annual field trials this year upon the beautiful moors of the Earl of Home in the neighbourhood of Lanark. It has long been agreed that this estate of the representative of the historic house of Douglas is the most suitable that has ever been used for the trial of pointers and setters upon grouse, for this is the fourth or fifth time that the generosity of Lord Home has been thus taxed in the interests of sport. The trials of last week will long be remembered for a variety of reasons. First of all the weather was delightful, and the scent was good from start to finish; but secondly, and more important still, was the obvious improvement that this occasion marked in the evolution of the setters, or perhaps it would be nearer the truth to say in the retardation of the decline of that breed which has been observed for some years. The pointers have not fallen away in the same degree, and of late years have nearly always beaten the setters. But it will be remembered that in the late spring Mr. Herbert Mitchell brought out a beautiful little setter bitch; one that took six of the principal events out of seven, and beat thereby the pointers, as well as all of her own race. It is true that during the last six years there have been perhaps four or five setters that could hold their own with the pointers, and some people were inclined to believe that they could have held their own with the very best when setters were at their prime twenty-five to thirty years ago. The writer never quite held that view, and when he has expressed the faith that was in him in the Press, it is quite possible that the younger generation of field-trial spectators put more faith in present facts than in an idealistic memory of the past. Indeed, it is so difficult to compare past things with present, when those things are represented by animal form — for which there is no exact measure — that I did not venture to say very much about my belief, and I might have said nothing whatever of it but for one encouragement; I had been the means whereby the Americans acquired the very best English setter blood between twenty-five and thirty years ago. They had kept it pure, without any cross whatever, and, looking at the extraordinary nature of their tests at the championship field trial out there, I felt that they must have preserved not only the blood, but the vitality of the race. Having expressed this opinion privately to Captain H. Heywood Lonsdale, he asked me to buy a few dogs for him if I could satisfy myself in my trip to America in 1904, when I was honoured by being invited to judge their Champion Stake. There I turned suspicion into certainty, and knew for an unquestionable fact that their dogs were at present far in front of ours, however,

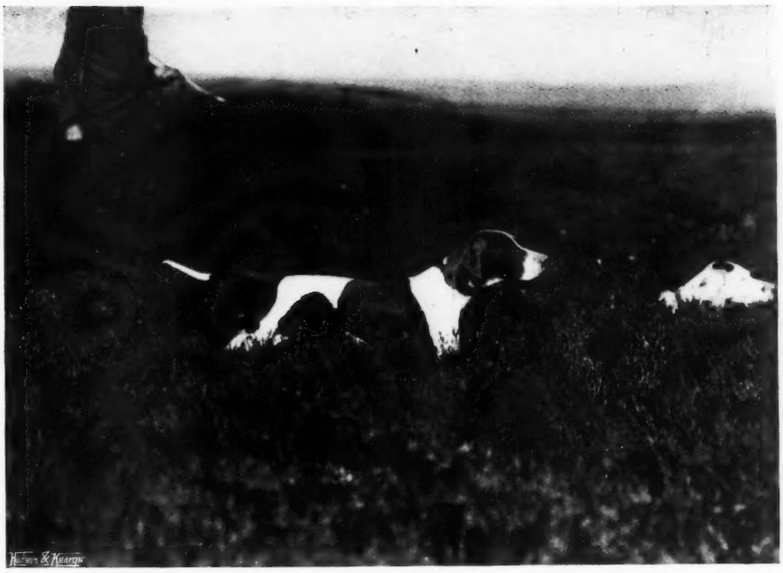
MAKING FOR THE HILL.

they might compare with the form of their English ancestors. In spite of this, I found it no easy matter to select what I wanted, and to get it; for they value some of their championship winners at £2,000, on the ground that they are worth £500 a year at the stud. I had, therefore, to rely upon picking dogs that had not been "discovered" in America, with the added difficulty that there was six months of quarantine on this side the water. This narrowed down the choice very much, as it was useless to buy a broken dog over there, and quarantine made it equally useless to buy a dog that had not had distemper. I may say that, although there are 6,000 straight-bred setters in America, and, as far as I knew then, not six left in England, the variety of formation, even among the crack workers at field trials, was very great, and very many of the best would have been too small to get about in long heather. I should not have published the origin of Captain Heywood Lonsdale's American setters but for the fact that he made no secret of it at the field trials; and the way his dog Ightfield Rob Roy beat first the celebrated Lingfield Beryl, and afterwards disposed of every pointer and setter in the All-Aged Stake, left no doubt about the winner long before the judges (Colonel Beck and Mr. S. Smale) announced the result of their labours. It is no exaggeration to say that Rob Roy created a sensation, not by winning, but long before the award was given, and that not one bit less would have been thought of him if he had by chance suffered defeat.

I have often said in articles on sport that the reason why some people had given up the use of pointers and setters, even on moors where birds will lie to dogs, is that they cannot get dogs which create an interest, or force an interest, by their own brilliant work. I think Rob Roy brings from America confirmation of this statement. The chances must have been 1,000 to 1 against selecting a first-rate puppy good enough to win here. When, too, it is remembered that Scot, who has done Rob Roy beautiful justice in breaking, was handicapped by losing a year's breaking, and starting the young dog at two years instead of one year old, much more credit is due to him, as well as to the American system of breeding by the automatic selection of the severest field-trial test ever made anywhere. Where Rob Roy is superior, even to the cracks of Captain Lonsdale's own kennel, is in power, style, and nose. There are lots of very fast dogs which look to be straining every muscle; and there are many slow ones that have lots of time to whip their sterns and look to be going easily. But this dog outpaced the fastest, and had lots of time on hand for that beautiful stern action that we all admire so much, not only for the sight, but for what it conveys in meaning. Then Rob Roy's pointing was often taken up at great distances, and his backing was as striking as any point could be. In a word, before knowing anything of the history of this dog, the old field-trial experts had decided that no such setter had run at our trials for many years. Of course, I was pleased to think I had not lost my judgment, and the whole field was pleased to think that there was at last a chance to renovate the breed of setters.

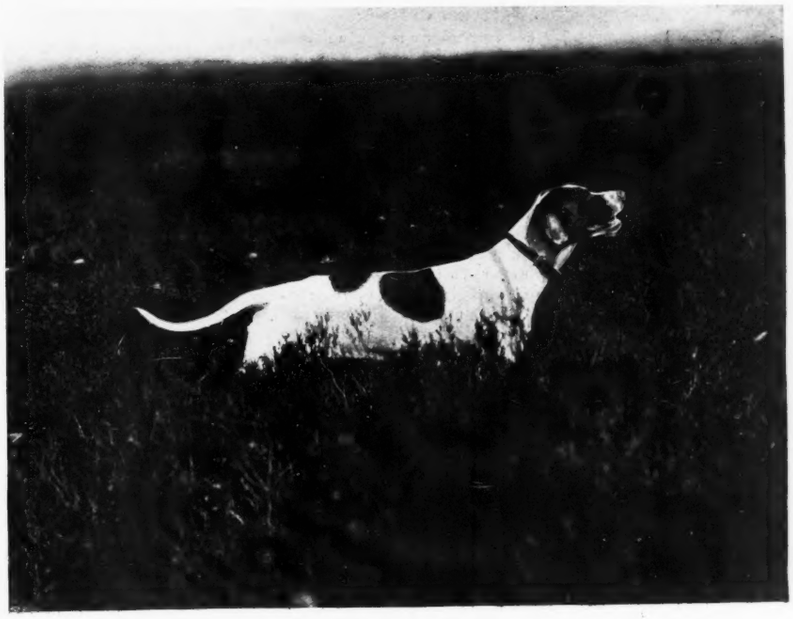
The second prize fell to an admirable pointer named Stylish General, belonging to Mr. Isaac Sharp, a big liver and white dog of quite good nose, and, like all Mr. Sharp's dogs, of admirable breaking. In the same stake Colonel C. J. Cotes's champion pointer Pitchford Ranger took third place, and his Pitchford Bang had fourth.

The Puppy Stake brought out a finer lot of young dogs than is often seen. Here, too, Captain H. Heywood Lonsdale won again by the help of a puppy that had run



IGHTFIELD MAC AND PITCHFORD RUIN.

IGHTFIELD DOT AND ROB ROY.



PITCHFORD DUKE.

unsuccessfully in the spring. Some people were inclined to condemn the judging for leaving in this puppy after a wild performance on the first day. I cannot agree with this principle, because, as I have often written, if you throw out all puppies that take the bit in the teeth in the early freshness of their freedom on the moors, you eliminate most of that material which is best worth careful coaching. If the judges thought the evil was not too bad to turn the dog out at once, then they were not wrong when they gave him first afterwards, because every dog he ran with went down before him. It was not known then, but is known now, that an exactly contrary policy, practised for years, has kept our breeding back, and allowed, by our default, the Americans to get ahead of us. Second to this smart youngster was placed a pointer, Pitchford Ruin, and third, Ightfield Dot, a setter. So that Salop was again successful, and Colonel Cotes continues his good form and luck, and Captain Lonsdale recovers his. The Brace Stake went to Colonel Cotes, too, with Mr. W. Arkwright a good second. The former won with the setters Pitchford Dear and Pitchford Dill, and the latter with pointers, namely, Sea Urchin and Wilful Duchess. Third fell to Captain Heywood Lonsdale, for the setters Ightfield Gaya and Ightfield Dolly.

IGHTFIELD ROB ROY.

A large number of dogs had certificates of merit awarded to them. These belonged to Mr. W. Arkwright, Mr. B. J. Warwick, Mr. Nicholson, Mr. Murgatroyd, and Hon. Gerald Lascelles, who, it should be mentioned, had bred the Dora of Lyndhurst litter, six of which were entered at these trials, and four earned prizes or certificates of merit. One other was unfortunately stifled in coming to the trials from Mr. B. J. Warwick's place in Inverness-shire, near Kingussie, where these trials were held two or three years ago. G. T. TEASDALE-BUCKELL.

WILD COUNTRY LIFE.

HONEST BEES AND CUCKOOS.

WHEN summer has risen to its height we miss—or do not notice—one of the most conspicuous features of the out-of-door life of the spring and early summer months—the bees. Not that there are not more bees—infinitely more—abroad now than there were in May; and at no time are bees in the aggregate—especially honey bees—more in evidence than among the lime trees when the latter are in flower, as they are in mid-July. Incidentally it is worth noticing how, apart from the low-growing shrubs and plants of the country-side, there is a succession of flowering trees from early spring until latest summer, which furnish continuous food supply to the bees and various kinds of flies. From early March, when the feast begins with the box, the alder, and the sallow, the procession goes on into early April, when every blackthorn bush is humming with insect-life; and before its petals have fallen the lilac is in bloom, followed immediately, so that one overlaps another, by the hawthorn, pink chestnut, and laburnum. To each in turn the bees resort in throngs, and before these disappear, our ears rather than our eyes tell us that the holly with its inconspicuous flowers has come to fill the gap until the lime buds, already swelling, burst in the great *pièce de résistance* of the yearly banquet. Other trees there are, of course, which the bees visit simultaneously with all of these, but these are enough to keep them busy from the time of the late snows until harvest. And the chain continues without a break until the last numbed insects crawl in the November cold about the late-lingering coronals of the ivy.

THE SPRING BEES' LOVE-MAKING.

But somehow after midsummer, plentiful though the bees are, even the multitudinous murmur of the lime trees seems to merge itself in the general riot of Nature, and, except as we find them bumbling drunkenly about on the ground beneath the trees ("bemused with linden wine") we hardly think of the individual bees. Whereas in the early spring, when flowers are few and foliage scarce, with only an occasional hibernated butterfly or moth, the individual bee is a conspicuous object; and especially conspicuous is what is known peculiarly as the Spring Bee. In the earliest sunshine of the year no one can well go out into a garden without the eye being attracted by what look like two different kinds of bee, but are in truth the two sexes of the same insect, one velvety black and the other covered in tawny plush, which chase each other like swallows, the brown always in pursuit of the black, over the beds of arabis, aubrietia, and polyanthus. The human eye has often difficulty in following their movements, so exceedingly swift are the sudden skimming flights in which they dash about the beds and rockeries; but after each lightning course, when the black bee stops to hover above a flower, the brown bee, its suitor, is seen to be still there, hanging unerringly poised some six inches above it in the air, as a hawk moth hangs suspended over a jasmine or petunia bloom. However hard the female tries, seemingly, to give the other the slip, the other—"the villain still pursues her"—is just as quick as she.

THE FREYED-ON AND THE FREYER.

If you find the place where these bees live, you will probably come across one of the most interesting things in all the insect world. Their home is likely to be in some sandy bank or old rubble wall, where they sometimes may be found in great numbers, for they are gregarious. That is to say that, though they do not live in communities like the hive-bee, but each female makes her separate nest, they dwell in large colonies, the individual nests being close together, so that in an area of a few square feet of bank or wall there may be hundreds of the bees. Such a wall I know, with a warm exposure to south and west, which on any sunny day in spring is as busy as Threadneedle Street. A casual observer, looking at this wall with its humming insect-life, would be tempted to suppose at first that there were four kinds of bees among the crowd, whereas as a matter of fact there are but two: first, the two sexes, brown and black, of the bee which we have already seen, an Anthophora, which is the legitimate householder in the wall, and, second, the two sexes (though in this case the difference is only a comparatively slight one of size) of a parasitical or "cuckoo" bee (Melecta Punctata), which does no work in life, but lives on the labour of the Anthophora, entering the nests of the latter and depositing its eggs on the food which the honest householder has stored up for the use of its own offspring when they shall emerge. The "cuckoo" is almost as large as the creature on which it battens (considerably larger, that is, than the common honey-bee), and, as it can afford to be in its life of idleness, rather a gentlemanly, nice-looking bee garbed in smooth, glossy black, picked out, in excellent taste, with little spots or tufts of white.

IDLE AND INDUSTRIOUS APPRENTICES.

Observers speak of the great hostility which exists between the two species, the lamb and the wolf, but I have never been able to see any indication of it. In my wall, at all events, they seem to live in the greatest of amity, the cuckoos loafing about unconcernedly in the doorways of the homes while the householders push past them on their way in and out. Occasionally there is a collision, but of the most trivial character, and without the least sign of real bitterness of feeling on either side. The impression created by looking at the wall in the sunshine is that the cuckoos largely outnumber the honest bees; but that, if a census could be taken, would probably be found to be an error, the fact being merely that the former are always in evidence, having nothing to do but stand about and flirt with each other. The industrious householders, on the other hand, are for ever coming and going, not stopping to hang about and sun themselves as the others have abundant leisure to do, but passing almost directly into their holes (after some little difficulty in deciding which the right hole is) and, on emergence, going off about their business with hardly more delay.

THE DISGRACE OF HAVING NAKED LEGS.

There are various species of the cuckoo-bees—though few so conspicuous as the Melecta—each of which, curiously enough, confines its parasitical attention to some one species (or to two or three closely allied species) of honest bee. Thus Melectas never live on any but Anthophora. And all the cuckoo-bees, with, I believe, one exception, have a physical characteristic in common—namely, the absence of bristles or brushes on the lower parts of the legs, which bristles are the instruments chiefly used by bees in the collection and carriage of pollen and of materials for nest-making. This absence of the bristles gives the name to the group or subsection to which the parasites belong—the nudipedes or naked-legged; and that excellent, if rather

circuitous, authority on British bees, Shuckard, commenting on this peculiarity, says: "Thus Nature, having rendered them unable to perform the duty to their offspring (*i.e.*, having given them no bristles on which to carry home the food for their young), has imposed upon them the necessity of resorting to strangers to support them, and they are not led to it by idleness or indifference." It is nice and kind-hearted thus to apologise for their thriftlessness; but Shuckard wrote forty years ago, and it is much to be feared that modern science would twist the sentence round the other way. The bees having acquired the incorrigible and shameful habit of living on the labour of others and doing no work themselves, the very power of work was ultimately taken from them. The organs through long disuse disappeared; and the unbristled legs in a bee are in truth a badge of infamy.

How Idleness Breeds Effeminacy.

What I have not seen noticed by any naturalist is that these idlers seem, as one might expect of people of such soft and unlaborious lives, much more sensitive to changes in the weather than the hardier insects with whom they live and who are constantly out drudging to earn a livelihood for their families. When the spring sun shines full and warm on that south-west angle you can hear the hum of many wings at twenty-five yards distance, and when you look closer you will see that by far the greater number of the insects about are cuckoos. Let but the lightest cloud pass over the sun, or the smallest breeze spring up, and in less than a couple of seconds the noise will diminsh by more than one half, and you become aware that all the bees that are still on the wing are the honest householding Anthophoras. The effeminate parasites have instantly withdrawn into the holes or are sitting disconsolately here and there as flat as they can make themselves against the wall. And another curious thing is that the female householder seems to be more ready to go into hiding than the male. Perhaps it is that the males are ranging further from home, and are therefore longer in arriving when an overcast sky warns both alike that it is best to find familiar shelter. Whatever the cause, the sequence of events is invariably the same. At any given moment, when the spring sun is shining warmly, there will be, perhaps, a hundred bees on the face of those few square feet of wall, and of those hundred probably sixty-five or seventy will be cuckoo-bees. If the sun goes behind a cloud, the number of bees visible will almost instantaneously drop to thirty or thirty-five, and every single specimen of those remaining is a householder. Of those householders not more than four or five in the lot will be males—all the rest are velvety black. Let the sun stay hidden for but three minutes and the number of thirty or thirty-five will decrease by one half, but lo! of the fifteen or so which remain buzzing about every one is now a tawny male. The females, only a degree less hardy than the parasites, have all gone inside. Ten minutes later, if the weather continues to threaten, the males disappear too, and the wall is deserted and silent. I have watched the process again and again, and the order of events is invariable.

All the Same Twelve Months Hence.

But at this time of year the wall is always silent—except for certain other interloping insects which now frequent it. The bees of the spring are gone. Inside the holes the young of the next generation are growing fat on the food that was stored up by the hard-working plush-clad ladies of the early months. But many of the young of those same ladies, for whom they thought they were nidificating, have died for lack of food, because the young of the cuckoo-bee has emerged a few days earlier and eaten the store that was intended for the other. But, as I have said, I cannot see that this un-neighbourly behaviour makes any difference in the cordiality of the relations which exist among the grown-up insects year after year. Next spring, I have no doubt that there will be the usual number of cuckoos loafing, preening their idle wings for the fiftieth time that morning, in the very doorways of the homes, and past them the householders (those which are lucky enough to get the food that was intended for them) will brush unconcernedly on their way in and out. Bygones, they seem to think, are bygones.

H. P. R.

WITH ROD AND RIFLE IN MAINE.

DURING the latter part of last summer and part of the autumn, I went up from New York, where I was staying, to try and get some shooting and fishing among the woods, rivers, and lakes of Maine. I am tempted to write a short account of my sporting trip, illustrated by some photographs, in the double hope that it may help those sportsmen at home here who, on account of the way our big game is preserved, are not able to satisfy their desire of shooting some of the larger species of animal; and, further, that it may show those sportsmen who are anxious to add a specimen head of that wonderful beast, the bull moose, to their collection that the time is at hand when those animals, like very many others of the American continent, will be extinct, excepting in those places where there are strict Government preserves, and that the chance of shooting one will have gone.

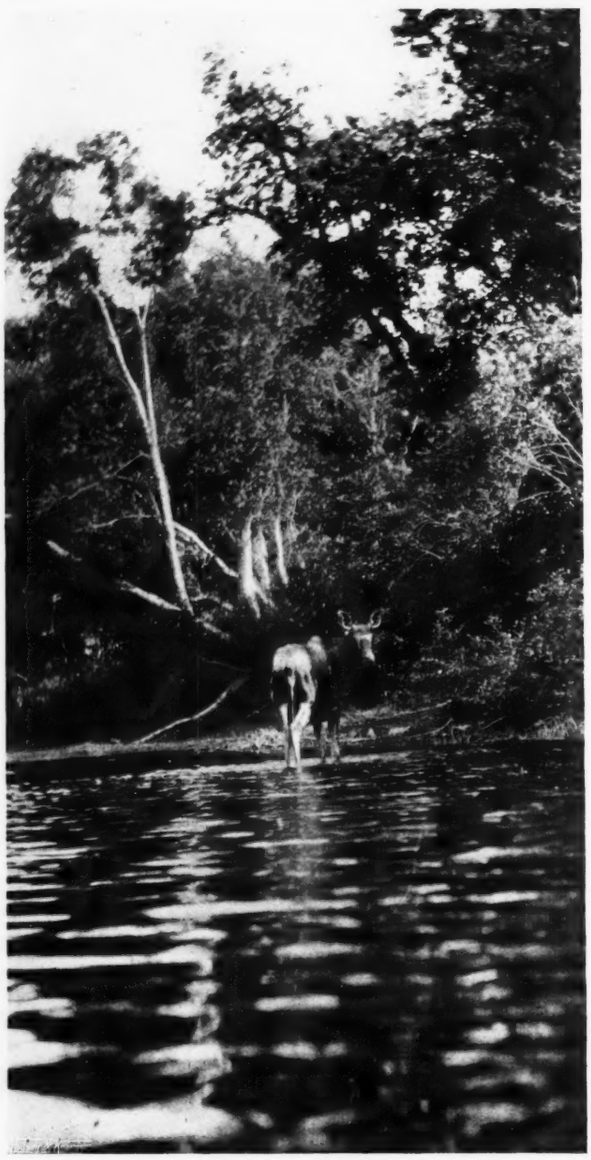
MY HOME CAMP.

There are many of our best sportsmen who are, on account of business, prevented from getting the amount of shooting or fishing which their hearts would desire. These sportsmen may find that, some time in the near future, their business may take them over to New York, and that they then could spare a week or two to make an expedition into the wilds of the Maine woods. There is a very large number of those Americans who are in business in some of the neighbouring towns to Boston and Bangor who spend their vacation in this way, and I am sorry to say that, from what I saw, their ideas of sport, and the way they absolutely disregard the game laws or the ordinary laws of sport, are very quickly reducing in Maine what must have been a fine stock of moose; and I fancy that, though the deer are still plentiful, it is only a matter of time till they are either exterminated or driven away to the north, and so out of the United States of America. The State of Maine may be termed one vast forest of both hard and soft woods, broken up by innumerable rivers, lakes, and swamps; and it is most interesting to watch how the lumbermen use both rivers and lakes for driving the lumber, a large quantity of which is consumed in the manufacture of paper, down to the mills, many of which are over 100

YOUNG BEAR CAPTURED WHEN ITS MOTHER WAS TRAPPED.

miles distant. On setting out from New York my chief ambition was to shoot a bull moose and procure specimens of the American red deer, and, though successful in getting the deer and having two good hunts or stalks after moose, I had to return without having killed one. Leaving New York at midday, and travelling *viâ* Boston and Bangor, one arrives, after a day and a night in the train, at a small junction of the Bangor and Aroostook Railway with the Canadian Pacific. Greenville Junction is situated amidst most lovely wooded scenery on Mooshead Lake—a sheet of water rather over forty miles long, with an average width of perhaps six or eight miles. A small and somewhat antiquated steamer carries one, *viâ* Kineo, a large and fashionable American summer resort, to North-East Carry, which is situated at the head of the lake. North-East Carry is a small settlement, consisting of a small hotel, some fishing huts, and a store. Here there is good spring fishing to be had, and also good deer-shooting all along the Penobscot River, which is about two miles' walk distant. As there is no very good country for moose, I spent a day or two getting guides, camping outfit, and provisions sufficient to last for about three weeks, and started early one morning for the hunting-ground which my guide, Bob Eddy, a hunter, advised. It was three days' journey by canoe, with several long carries from one river or lake to another.

The first day we canoed down the Penobscot River to where it flows into a large lake called Chesuncook. Here we got a night's shelter at a farmhouse, and made an early start for our second day's journey, which, on account of the low state of the rivers, we found much harder than usual. Having paddled across Chesuncook Lake we made our way up a river called Umbazookskus, about fifteen miles, six or seven of which had to be waded and the canoes dragged. There were quite a few duck and wildfowl, and while walking I got some nice shooting at duck coming down wind, which reminded me of many happy days on a Scottish grouse moor when taking part in good drives. We got through the shallow water, and lunched at Ambazookskus Lake, where there is a sporting camp and quite a little settlement of guides and trappers. The owner of this camp very kindly let us have the use of his horses and waggon to get our canoes and stores through the forest to Mud Pond, a distance of about three miles. I walked on a short distance before the waggon, and was rewarded by getting a brace or two of partridges, or more correctly called ruffed grouse. When Mud Pond is reached, it is at once realised why such a name is given to it. It is a circular lake of soft, red mud, having a diameter of about two miles, and it is a very hard struggle to get the heavily-loaded canoes through the mud to the other side.



COW MOOSE IN PENOBSCOT RIVER.

Having got over this difficulty, we set to work to pitch our tent and get our supper ready. We found some game shot the day before and made into a stew very acceptable after a long and hard day's work in the keen air. The last day's journey to the place selected for our home camp was started with a carry of about three-quarters of a mile to Chamberlain Lake. Canoes, tents, stores, guns, etc., had all to be carried or lugged, as the guides out there term it, and a long and hard job it was. Chamberlain Lake is a beautiful sheet of water, about eighteen or twenty miles long, with forests on all sides full of deer and other game. Our home camp was pitched after a paddle of some sixteen miles at the mouth of the Allagash River, which is surrounded by a large piece of marshy ground, supposed to be the best for moose. While the guides were pitching the camp, and cutting both fir twigs for our bed and hard wood for the fire, I had a wander round, and replenished our stock of game with some Canada grouse and some more ruffed grouse.

Our first day in camp was spent largely in getting things fixed up and our stores opened out, when bread had to be made. A look round the neighbourhood to see if we had any neighbours, finished up a rather easier day than we had had since leaving North-East Carry. Next morning we had a cup of tea at daylight, about five o'clock, and made a trial trip in the canoe up the Allagash River. It had been a sharp, white frost, and the ground looked as if there had been a fall of snow. We had not gone very far when we saw two foxes, but as we did not want to make any noise we let them have a renewed lease of life. Not very much further on we saw a moose, and managed to get to quite close range, only to find that, being a cow, we were disappointed, and had to return to camp for some breakfast. Meals had to be cooked and wood cut for the fire, and this took some time, but we had a walk of about fifteen miles through an old lumber road, and saw quite a number of deer, but did not shoot any, as the heads were not very good. I again was able to get some more birds. I may say that both the ruffed grouse, as also the Canada grouse, are very pretty birds, and the former is very good eating, resembling to a large extent our pheasant. Neither bird yields much sport unless shot with a small-bore rifle or a revolver. Another bird we had some fun with is the great northern diver, or, as the Americans call it, the loon. Though of no use for food, it is a nice bird to mount, and it is almost impossible to shoot it; at any rate, so far as my experience of it on the Maine Lakes is concerned.

Several days were spent in this way without seeing any moose, and so we resolved to leave our home camp and do some days' hunting further afield. We had arranged to go up the Allagash River, which on account of the very dry season was very low, too low, in fact, to canoe up. This made it necessary for us to dispense with all our tents and impedimenta, with the exception of a few things absolutely necessary for food. We went up the Allagash River about ten miles to a small pond called Little Allagash Lake --- perhaps a mile in diameter. This was, I think, about our hardest day's work. Almost the whole distance had to be waded, lifting the canoe over stones and dried up reaches of the river. It took us the whole day, and we were glad to lie down under some cut fir trees after we had had some supper.

Next morning we were early afoot, and saw a good bull moose at the far end of the pond. We at once started to stalk him, but could not get near him. All day we stalked and waited in the hope that he would come out again, but we were doomed to disappointment. All next day we hunted through the woods, and I got a shot at a nice buck standing in the river at about two hundred yards. I got him, as the shot broke his back, and we were glad to vary our menu next day with some venison steaks. As we had no luck, still hunting for moose, we resolved next night to try calling, and I spent the day shooting grouse, etc., while my guide cut wood and got some white birch bark to make a moose-horn for our night's calling. Calling consists of

imitating the cow calling, and is repeated at intervals of about seven or eight minutes. It was a fine night, but very dark when we started, and having run our canoe up into a marshy piece of land where the river entered the pond, the guide started calling. The night was absolutely still, and the time seemed to drag, as every nerve was strained to catch any reply to the guide's call. After about two hours, which seemed more like a whole night, we heard, far away in the forest, a sound like the low bark of some huge dog. Yes, it was an answer to our call, and nearer and nearer came the reply. To get to us he had to come through a big cedar swamp, which was so thick with growth that one would not believe it possible for an enormous beast with huge antlers to get past. When he entered this I thought the whole forest was being torn up, because of the crashing of the small trees as he forced his way towards us. He came quite near where we were hidden, but very unfortunately got wind of two cows which were feeding further down the shore, and passed us before we could see him, it was so dark. With wonderful skill my guide shot the canoe out on to the lake, and made for where the bull had chased the cows into the lake. We got up to about thirty yards from him, and having got the word from the guide I opened fire. All three rushed off, and the bull gave some savage barks, showing he had been hit. After the same noise in the cedar swamp, as he forced his way through, suddenly all was quiet, and the guide raised my hopes by saying we should get him next morning.

COOKING OUR MIDDAY MEAL.

Next morning we went over to the scene of the night before and found marks of blood. We traced the moose about five miles into the forest, but had to return without having found him. We then returned to our home camp in a snowstorm, as our provisions were done. The rest of my time in the woods was spent working hard all day, from dawn to dark, and though I had good sport, I had to return to civilisation without any further chance at a moose.

Our bag consisted of our limit of deer, wild cats, ruffed grouse, Canada grouse, porcupines, musk-rats, minks, and duck. My guide unfortunately had not taken any traps with him, otherwise we would almost certainly have got a bear or two. A whole deer carcase was taken from our camp one night by one bear, and we found fresh tracks of another at an old logging some twenty miles away. I shot with a 30/30 Winchester, which is a nice little gun; but, perhaps, had I taken a larger bore, I might have got my moose. Though disappointed at having to return without a moose head, it was a great experience, and one which, I am sure, would appeal to any sportsman. At times it is a bit lonely, and one wants a friend to talk over the day's sport with; but the guides are good chaps, and do all they can to make your time with them in the woods a very pleasant holiday, and to get you all the sport they can. It is, at times, not a little rough, and the walking is very hard; neither is it over-pleasant to be alone in those big, lonely woods, waiting for the guide to take you back to camp—for the stranger could not find his way alone, but would, in all probability, go off in quite the wrong direction. As dark comes down, and the wild cats and night birds join in their wild concert, at times varied by the lonely cry of the loon or great northern diver, one is glad to get back, often very tired, to the big, blazing camp-fire, where some partridge or rabbit stew is ready for the hunter. The day's work and the next day's plans are then discussed over a pipe, and having rolled one's self in two or three blankets in front of the camp-fire, one is soon asleep.

A word in conclusion regarding the fishing. I understand the best fishing is to be had on the lakes just as soon as the ice is off, usually about May. At this time large trout up to 12lb. or 14lb. are often got, as also are land-locked salmon and lakers, a kind of white trout. My experience in autumn was that the smaller lakes did very well for a few hours in the evening just at sunset, and in three hours' fishing I several times got sixty-five or seventy trout averaging about ¾lb. That there were

YOUNG BULL MOOSE, OR PRONGHORN, IN LOBSTER LAKE.

WILD GEESE ON MOOSHEAD LAKE.

much larger trout there I saw up the small streams, where six or eight pounders were in hundreds going to spawn. Some of the photographs taken may, I hope, be of interest to any who may chance to read this, and help to explain what, I fear, I have only very indifferently done in the foregoing writing. J. W. B.

HORSESHOES.

HORSES have been used by man for so many thousands of years, have carried him through battle, bled and died for him in the chase from the earliest times, and been his faithful servant from such a remote period in the memory of his race, that we perhaps have never thought of the suffering and loss of the animals that occurred before the invention of horseshoes increased the endurance and utility of horseflesh.

The first kind of shoe known was not a shoe at all; it was a species of sock, often made with woven or plaited hemp. Camels in ancient warfare were thus shod, and so were mules and horses when their hoofs were hurt. In time of heavy snow these socks were necessary to prevent the horses from sinking up to their girths in the snow, according to an old writer; similar socks are used by the Russians in Kamtchatka for their sledge-dogs, and this kind is provided with little holes for the claws. Horse-soles were also made of woven broom, reeds, and bast strapped on, such as are still used in Japan, where they are made by the children who wait about the roads offering them for sale at a low figure. The next step made by the old Romans and Greeks seems to have been the manufacture of leather soles and shoes; but the great drawback to all these hoof-protectors was the galling of the straps, and they were really only of substantial use in the case of baggage animals, or when the road was rough and dangerous. Delays were often occasioned by the shoes sticking in the mud and letting the horse go on in front. It is very clear that no efficient kind of shoe for warfare was known in those early times, for when Mithridates was besiegirg Cyzicus he had to send the whole of his cavalry to Bithynia because their hoofs were worn out, and Alexander the Great on his marches had to leave his horsemen behind on several occasions from the same cause. Moreover, there is no indication of iron shoes on Trajan's column, on the bas-reliefs of Castor and Pollux, the frieze of the Parthenon, the mounted statues of Pompeii, nor in the mosaics representing the overthrow of Darius by Alexander in the Naples Museum. A most interesting document was found in the year 1827, being an ordinance of the Emperor Diocletian, dated 303 A.D. This ordinance set forth the various prices of labour that were to be paid, and the price of different necessaries of life; there are two cases of veterinary fees—a mule doctor must be paid six denars for clipping an animal and paring the hoofs, and for grooming and cleaning him twenty denars, but there is no allusion to shoeing.

So the old "mule doctors" had to devise means of hardening horses' hoofs. One advised stone slabs fastened with iron clamps to the ground which formed the stable, another recommended oak flooring, while yet another prescribed the smearing of the bottom of the feet of draught animals with pitch. The exact date when metal shoes were first brought out is not known, but it is said that Nero had the mules attached to 1,000 carriages shod with silver sandals, while Poppæa's mules were gold-shod. These may be the hipposandals which have been found wherever the Romans settled—in Germany, France, and England. About the middle of last century a great number of these was found at Dalheim in Luxembourg, and an interesting collection is to be seen in the Guildhall Museum in London. The form of the hipposandal varies; the commonest shape is an oval plate of metal drawn out backwards on both sides, and in some cases fitted with a curved hook. There are wings to the sides, and in front they are furnished with eyes and rings. Another kind is distinguished by the bending upwards of the sides in front and behind, suggesting to the eye the form of an ancient galley. They were fixed to the hoofs by straps passed through clips and rings. Those to be seen in the Guildhall, however, which were found during excavations in the City, are so curious and clumsy that one can hardly believe that a horse could walk with them on; in fact, they look more like holders for lamps than any kind of footgear. It would be difficult to conceive of any man even trying to put one of these on a horse. Another, which looks like a hipposandal cut in half, would be more suitable for a drag than anything else; yet the Romans, who were such experts in road engineering, would not be likely to use a drag which, by reason of the hook, would tear up the road so abominably. A third looks much more possible as a shoe, with the holes and rings for the straps to fasten it on, and with a space to allow the movement of the frog. When Isaiah said, in order to make the enemy appear more terrible (v., 28), "their horses' hoofs shall be counted like flint," he certainly was not speaking of horses shod with hipposandals.

French horseshoeologists think that the Celts were the first to use nailed-on shoes before the Christian era, and that they popularised their use throughout Gaul, Germany, and England. Many shoes have been found in graves, the favourite horses having been slain and buried with their masters in accordance with primitive beliefs as to the hereafter. Between the French towns of Langres and Dijon, near the spot where Cæsar encamped his army at the siege of Alesia (B.C. 52) small fullered shoes have been found at a depth of 2ft. or 3ft. in the ground. Some have nails in the shape of a Roman T and are provided with clenches. Others ascribed by geologists to the sixth century have been found in the Bernese Jura. All these had six large round nail-holes, and opposite to each hole the border of the shoe is scalloped. Some shoes had heels and some had not; but the heels were hardly of any size, and, moreover, lacked strength. They were 3-16in. thick, 5-8in. to 11-16in. broad, and the weight was from 3oz. to 3½oz. The nail heads were flat and slightly rounded towards the side. There was no finish about the shoeing, for the nails were not cut, but simply beaten flat against the horn. Many discoveries show that the Gauls led the way in horseshoeing, even if they were not the first inventors of nailed-on shoes; they never pared the hoof, and the shoes themselves were slender and unclipped. The shoes belonging to the Gallo-Roman period weighed from 6oz. to 9oz., indicating a possible improvement in the breed, and the nails had smaller heads, being less like violin pegs; but the clenching was distinctly bad, more like the work of Oriental nations in this kind.

An iron shoe now in the Nicolai Church at Leipzic is said to have been lost by St. George (290 A.D.) when pursuing a dragon. At Saalburg, an old Roman fortress, a number of shoes were found in 1870, but whether these were Roman or German is not certain. Some had no calkins, and these were somewhat like the heels of interfering shoes—deep, and taper towards the ground. They were 5-8in. to 1¼in. broad (web), 4in. to 5in. long, and 3in. to 4in. broad over all. In the eighth and ninth centuries a broddar or "frost-nail" was used in Scandinavia. This was a cramp with forward projections, the points of which were driven through the wall of the toe. They have been found in graves and in the old Viking ship at Sandefiord in Norway, and are still used in parts of Finland.

Duke Boniface of Tuscany was the first to have the crescent-shaped shoe made of silver, and his horse was thus shod for the duke's wedding in 1034; and in the year 1130 the Norwegian king Sigard, the Crusader, had his horse similarly shod, but with gold, on the occasion of his entry into Constantinople. William the Conqueror brought farriers over to England and appointed as superintendent of farriery Wakelin von Ferrariis, Count of Ferrers and Derby. The shield of this family bears six black horseshoes on a silver ground at the present time, and to this day the descendants of Wakelin have the right to demand a horseshoe from every baron and nobleman marching through the town,

which shoe will be nailed on the door of Oakham Castle. Whether shoes at the time of Wakelin bore the keyhole shape is not certain, but the suggestion is at all events interesting.

Fiaschi, an Italian, led the way in systematic farriery, being the first to distinguish between front and back, right and left, heels, heelless, toepieces and clips. The French found out that the frog should touch the ground, and in 1768 the first veterinary school was started in Lyons. England led the way at the end of the eighteenth and the beginning of the nineteenth centuries. Schools for farriery have been established in various Continental towns from 1847 onwards, and a German law passed in 1883 enjoins a compulsory certificate. The Germans are most prolific in inventions relating to horseshoes; and these inventions, besides iron, bring in the use of leather, cloth, oakum, rubber, gutta-percha, straw, cork, and other materials. But few of these patents seem of much use, and the world is still waiting for a perfect shoe without nails. It has been suggested that the Worshipful Company of English Farriers should arrange a practical test in shoeing, besides a merely theoretical one, and, no doubt, the Royal Agricultural Society will succeed in their endeavours to bring this forward.

As a symbol of subjection the horseshoe is not familiar to everyone, but that it was at one time so recognised may be learned from the fact that about the middle of the eleventh century, Arp Arslan, the Persian Sultan, invaded Armenia and Georgia, and compelled the defeated Georgians to wear a horseshoe over the ear in token of their humiliation. A quaint custom is still kept up in Lancaster. John of Gaunt, the son of Edward III., while riding through the town one day cast a shoe; the people, rejoiced at the good omen, fastened the shoe in the middle of the street, and every seven years a new horseshoe is placed in the same spot by the residents of Horseshoe Corner. Why the horseshoe is lucky, and why the Caucasian blacksmith and his brother in parts of Russia make amulets and are looked upon as magicians, are problems that bring out some interesting folk-lore, and may be dealt with in an article later on. But the shoe is lucky probably because the hoof-print was regarded as lucky, the horse having been worshipped by various nations, the beautiful winged horse of classic legend being a direct creation of the imagination of horse-worshippers.

And since poets have sung so prettily of "the horseshoe's curved charm," why should we not cherish the lore and legend woven round the history of our favourite's footwear? He who does so will find rich food for reflection on many a solitary gallop, and much amusement, and we might fittingly say to him "Happy art thou, as if every day thou hadst picked up a horseshoe."

HAWK MOTH CATERPILLARS.—II.

IN my notes on the "hawks" in the last issue of COUNTRY LIFE I concluded by a brief mention of the rare migrant "striped hawks." A near ally of these is depicted in the larval condition in our first illustration this week; it is the caterpillar of the Oleander Hawk (Daphnis nerii), the imago of which is thought by many to be the most beautiful of any ever taken in this island. The caterpillar is dimorphic, being either green or orange yellow in colour, the former being by far the more profuse form. On the metathoracic segment is situated a large brightly-coloured "eye-spot"; this is mostly of a very pure blue tint, but a delicate shade of pink can also be observed. The entire "eye-spot" is surrounded by an irregular black ring, and has, of course, no relation whatsoever with the functional eyes, but is merely a cutaneous marking. The object of this "eye-spot" is, in all probability, to alarm the caterpillar's enemies, inasmuch as the thoracic segments, and head, anterior to it, superficially resemble a large proboscis, thus producing a very unusual, if not terrifying, aspect. The chief pabulum is the oleander (Nerium), but it also feeds on the two common garden periwinkles (Vinca major and V. minor). In England, however, unfortunately, the caterpillar is never found, the species owing its inclusion in the British list to stray immigrants that appear from year to year, generally captured hovering over flowers or "at light." The majority of our examples seem to have been taken in the vicinity of Brighton, Lewes, and St. Leonards.

The Large Elephant Hawk (Eumorpha elpenor) is represented in the second illustration, and it will be observed that it exhibits somewhat similar "eye-spots" to those commented on in Daphnis nerii, though they are differently situated. Besides the protection gained by these prominent and terror-inspiring "eyes," the caterpillar also bears a marked resemblance to its environment. Its colour may be either brown or green, and it adapts its mode of life accordingly, in the former case remaining concealed among the roots of its pabulum by day and feeding by night; in the latter remaining well exposed throughout its entire existence, trusting to its green colour harmonising with the green foliage of its food. It feeds on the "willow herbs" (Epilobium), the balsams (Impatiens), fuchsia (F. fulgens), vine (Vitis), "bedstraw" (Galium), and several other plants. Though a very generally-distributed species in the South, East, and West, it becomes very rare in the North, and is hardly ever seen in Scotland.

OLEANDER HAWK MOTH CATERPILLAR.

The Small Elephant Hawk (Theretra porcellus) is very similar to its larger ally just described, including the occurrence of dimorphism in the caterpillar. It may be found feeding on various species of bedstraw (Galium verum, G. mollugo, G. aperine, etc.), and also on epilobium and lythrum, and is best obtained by searching these plants at night by aid of a lantern, when it is well exposed while devouring its pabulum. It is a well-distributed species in Scotland, England, and Ireland, though it cannot be called "common."

The first figure on the next plate represents the Lime Hawk (Mimas tiliæ), another of our more common species. Personally, I have found this caterpillar of distinctly suburban habits, due probably to the fact that its food, lime and elm, is largely planted in suburbia for ornamental purposes. It is to be found on either of its food plants in July or August, and in

coloration and marking much resembles the last two species mentioned, though the body is more prominently shagreened, and of a different shape. The broad-bordered Bee Hawk (Macroglossa fuciformis) is represented in the next figure; its colour is a clear fresh green on the dorsal and lateral surfaces, but ventrally is a deep purplish brown hue. The system of ventral coloration harmonises well with the purple-red stalks of the woodbine (Lonicera periclymenum), one of the pabula of this caterpillar. It also feeds on lady's bedstraw (Galium verum), scabious (Scabiosa), ragged robin (Lychnis flos-cuculi), etc. Though not a rare species, it is distinctly local, and very hard to capture. It derives its name of Bee Hawk (as does the following species) from its superficial likeness, while on the wing, to a large bumble-bee, the moth having almost transparent wings, and a somewhat bee-shaped body, thus forming a striking example of protective mimicry. The caterpillar of the Narrow-bordered Bee Hawk (Macroglossa bombyliformis) is very similar to its first cousin just mentioned, but it feeds only on the field scabious (Scabiosa arvensis) and the Devil's-bit scabious (Scabiosa succissa). It is a rarer species than M. fuciformis, but is taken in fair numbers in the New Forest and one or two other favoured spots, principally while hovering over rhododendron flowers. Our last figure portrays the caterpillar of the Humming-bird Hawk (Sesia stellatarium) in the act of devouring some lady's bedstraw. This is another larva which exhibits dimorphism, being either green or brown, though the latter form is very rare in Nature, but not infrequent when the larva is kept in captivity. The moth is a migrant, and has immense powers of flight, covering vast areas in its migrations. Individuals that arrive in early summer deposit their eggs and die; from these eggs a second brood is produced, which in their turn may produce another brood, the final imagines contriving to hibernate, but very few of them succeeding, the majority perishing from cold and damp. This inability to pass the winter successfully prevents the species from becoming truly indigenous, the stock having to be kept up by immigrants. The caterpillar feeds on various "bedstraws" (Galium verum, G. mollugo, G. palustre, etc.), and is easily obtained by carefully searching these plants by day or night.

The first caterpillar in the last illustration is that of the Eyed Hawk (Smerinthus ocellata), probably the best known of any of the Sphingidæ. This caterpillar is of an apple green colour, with the usual white oblique lines, and a blue caudal horn. It is an

LIME HAWK; BEE HAWK; HUMMING-BIRD HAWK.

LARGE AND SMALL ELEPHANT HAWK.

intensely tough creature, and generally has a most pertinacious grip of its food plant, which is the osier (Salix viminalis), a plant most apt to be shaken severely by the wind; therefore, any creature upon it that had not a firm foothold would be dislodged. Besides the osier, it feeds upon other species of Salix, and on poplar, and is also frequently found on apple trees in orchards. It is very generally distributed, and is found in August and early September. The most nearly-allied species, the Poplar Hawk (Amorpha populi), is illustrated in the lower figure of the same plate in one of its characteristic attitudes. This attitude, which has been termed the "terrifying attitude," is produced by the contraction and arching of the thoracic segments, and is thought to be of service as a means of defence. The Poplar Hawk is, perhaps, the very commonest of all our hawks, any favourable-looking poplar, as a rule, yielding it often in large numbers. It feeds on various species of poplar (Populus nigra, tremula, etc.), and is to be found in August and September. A hybrid between Smerinthus ocellata and Amorpha populi has been artificially reared, though, unfortunately, I have no knowledge of the caterpillar.

With this species my account of the "Hawks" must close, but it will be seen that the expression of "the Hawk Moth" is a very vague, if not an ignorant, one; and I feel that in throwing some light on this point my notes will not be without their use.

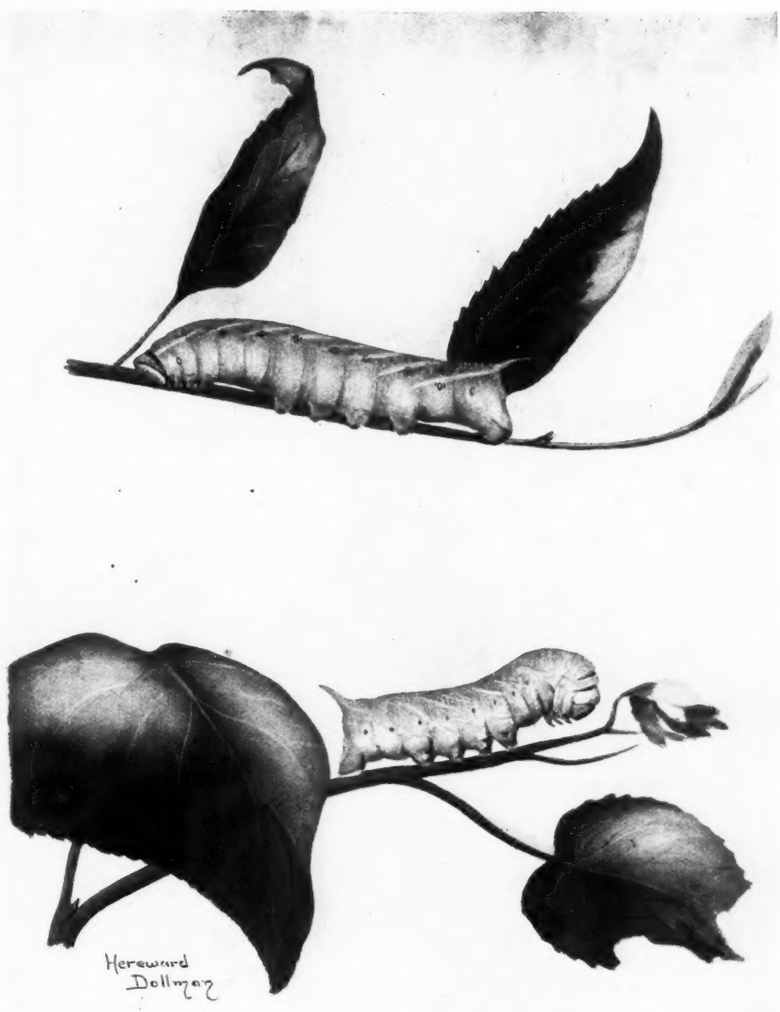
IN THE GARDEN.

Mixed Borders in Small Gardens.

THERE is no feature that brings fresher and brighter colouring to the English garden than the mixed or herbaceous border in which Roses kiss Carnations, and drifts of sweet-smelling Pinks look up at spires of blue Delphiniums. These joyous masses of colour should reflect the seasons of the year, else the border will be for one time only. A few notes sent to the writer on mixed borders in small gardens contain so much practical advice that it is thought well to reproduce them. It is pointed out that the aim should be to have flowers as early as possible in spring, and to keep up a succession until the autumn. "A great many plants can be used in the mixed border, but in a small place it is better to have only a few, so that there will be a good display of colour at a time, planting small clumps so that there are sufficient to make a show, but not so large that when their beauty is over an ugly gap is left. A list of the plants I grow myself may be useful to others. My borders are attended by myself only, so that the subjects recommended are easily grown, without requiring

much attention. The borders are on each side of the path leading to the house, and are 16yds. long and 5yds. wide. They are backed by tall evergreen hedges so that a good background is provided, an important point in the planting of perennial plants, the hedge throwing into relief the beauty of the flower colouring The first flowers to open in spring are Crocuses and Snowdrops, planted irregularly over the borders. Bulbs are somewhat in the way in a mixed border, but mark the spots with a stick so that their whereabouts are known when the foliage has died off. Following these come Arabis albida, Daffodils (Telamonius plenus and Sir Watkin), and Polyanthuses. As these begin to lose their beauty, Alyssum saxatile, Iberis sempervirens, Aubrietias, Wallflowers, and various Tulips are beginning to open. The dwarf plants need not be on the extreme front of the border, as a few stones or bricks can be used to raise them a little. After the first year the stones do not show, as the plants soon cover them up. These plants continue in bloom until the beginning of May, when Lupinus polyphyllus, L. p. var. albus, Aquilegias, and Pyrethrums begin to bloom. With the passing of these the summer flowers begin to appear—Roses, Delphiniums, Canterbury Bells, Campanula glomerata, C. persicifolia, Foxgloves, and Erigeron speciosum superbum. These are followed a little later by Coreopsis grandiflora, Lychnis coronaria, L. chalcedonica (the scarlet Lychnis), Chrysanthemum maximum, and Galega officinalis, both mauve and white. Most of these are in flower until the end of July, after which the Coreopsis, which is in bloom until the autumn, Helenium pumilum, red and white Phloxes, and Solidagos make the borders gay with yellow, red, and white. These are followed by Helenium autumnale striatum, Helianthus multiflorus, Aster (Michaelmas Daisy) acris, A. Robert Parker, and some of the Pompon Chrysanthemums, which last until the frosts. Besides the plants I have mentioned, which form what one may call the groundwork of the border, I grow Antirrhinums, the annual Lupine (Cruikshankii), and a few patches of Mignonette, and night-scented Stock (Mathiola) for scent. Much can be done with a few penny packets of seeds of annuals to brighten the bare patches that may occur. L. Cruikshankii is especially useful, as it is in bloom more or less from June until the time of frosts. Some may say that certain beautiful plants are not mentioned, but I have tried to show how a border can be kept gay for at least eight months of the year without gaps. The plants I have mentioned follow each other well; in fact, no one set is over before another is appearing, so that there is a continuous display."

A Few Words about Arrangement.—The question of arrangement is usually a complicated one, but here are the don'ts to remember — namely, not to plant in straight lines and not to plant the tall growers entirely at the back. Slope them gradually to the front. An herbaceous border should be mixed in every sense of the word, though at the same time it is necessary to have a certain arrangement. The dwarfer spring-flowering plants are in bloom before the taller and later kinds have developed, and they are not out of place in the middle or towards the back of the border. Again, if a long season of bloom is desired, and the border is to be, say, from spring until autumn, the plants must be scattered over it. Coreopsis grandiflora is one of the best plants to use near clumps of bulbs, as it does not begin to grow much until the foliage of the bulbs begins to die down, and fills out over the bare places when required to later on. All the plants named above are useful for cutting, and if two plants of Gypsophila elegans are used also, the delicate sprays of flowers will be found of much use.



EYED AND POPLAR HAWK MOTH CATERPILLARS.

RANDOM NOTES.

Sowing Seed of Columbines (Aquilegias).—Whenever the Columbines are shown they are certain to win praise from everyone who sees them, and this is especially true of the spurred race, which has a pretty jaunty air, with the colours of the rainbow. Yellow, rose, pink, pink salmon, white, apricot, orange, and every conceivable tint we should imagine it is possible to reproduce in a flower are present in the spurred Columbines. We mention the fact now, as this is the time to sow the seed, which may be done in a little prepared bed of fine soil outdoors. When it is desired to have the spurred strain in its most beautiful phase, this point must be insisted upon at the time the order is given. Some Columbines are without the spur, and are not graceful, being rather clumsy and uninteresting. The spurred group is of the greatest use in indoor decorations, especially for the table, as they have the graceful beauty of the Sweet Pea, which is one of the most delightful of all flowers for this purpose.

Gustave Regis.—We have had this exquisite Rose for three years, and it has become a flower friend. It must be a perplexing Rose to the exhibitor. The buds promise so much, but the summer sun opens the long, apricot-coloured buds so much that the whole flower seems to say, "I am here to drink in the sunshine." The bud is the thing in this Rose, but the open flower, a mass of trembling petals, is beautiful also. The plant is crowded with flowers in all stages, and provides a picture for the artist. Plant it against a fence or dwarf pillar, and enjoy this gradation of flower beauty.

A New Water-lily and a New Calla.—Among the many beautiful plants shown recently by Mr. Amos Perry of Winchmore Hill, London, was a new Water-lily and a new Calla, or Arum, whichever one is pleased to call it. The Nymphæa, that is the former plant, is named James Brydon, and is, we believe, an American introduction. The flower is noticeable for its size, and, seen in the full light of a summer day, it scintillates with colouring, which is crimson of many shades, the one melting into the other, with the golden centre as a setting. The hybrid Nymphæas have imparted a new character to the water surfaces of the English pond and lake, and we cannot have too many beautiful new introductions. The Calla, called Mrs. Roosevelt, has a perfect little spathe of the Little Gem order, and the colour is a pure soft yellow. It will be valued for decorations, and may be easily grown in a greenhouse.

Beautiful Hybrid Irises. — One of the prettiest features at a recent meeting of the Royal Horticultural Society consisted of the hybrid Irises raised by that well-known Dutch hybridist and cultivator, Mr. C. G. von Tubergen, jun., of Haarlem. The flowers are delicately beautiful in colouring and texture, not brilliantly showy, but veined and suffused with subtle tints. It is impossible to adequately describe these gems of early summer, and those readers who wish to grow them should take note of the following letter from Mr. Tubergen: "The plants like a good, well-enriched sandy loam, without any artificial manure, though a liberal addition of old, well-decomposed cow manure may be added. The soil must be very deeply worked and carefully drained, so as to allow all superfluous water to flow away easily. This is a very important point, especially in winter, when the rhizomes (roots) are not yet fully rooted, and are apt to rot away if the water becomes stagnant in the soil. If the soil is heavy and stiff mix a fair amount of sharp silver sand with it. Surround each rhizome with some sand, and together with the cow manure, that must be finely broken, one should not omit to add a few handfuls of pulverised mortar rubbish, as these Irises delight in chalky soils. They need a warm, sheltered corner of the garden, where they can get the fullest amount of sunshine. This is essential in spring and early summer for ripening them off sufficiently, and thus enabling them to gather strength for next year's development. A capital place for them is at the foot of a south wall. The rhizomes must not be covered with too much earth, as this will weaken the crowns and sometimes prevent them from forming flower-spikes. Plant about the middle of October, 2in. deep in heavy and 2½in. deep in light sandy soils. This will be quite sufficient if only the roots are carefully spread out and not huddled together. As some of these Irises make growth before winter, cover the beds with Fir boughs to keep off cutting winds, and also, on sandy soils, to prevent the sand from being blown away."

COVNTRY HOMES GARDENS OLD & NEW

COWLEY MANOR, GLOUCESTERSHIRE,

THE SEAT OF . . .

JAMES HORLICK, Esq., J.P., D.L.

THE history of Cowley Manor is closely bound up with that of the Berkeley family. The first Berkeleys were often—we might say constantly—at law, and most of the records of their lawsuits, as well as most of the legal documents which resulted from them, contain the name of this manor. The great Berkeleys of Berkeley Castle had, it seems, in the twelfth century, a poor relation. He was a son, or a grandson, of Hardinge, whose history during the time of the Norman Conquest and of the wars of Stephen has but lately been elucidated. Hardinge, according to the old authorities, was a fighting man, a Dane, the son of Squantiber I., Prince of the Vandals. According to modern research he was son of Ealnoth, staller to Edward the Confessor, a sufficiently remote and honourable origin, we might have thought, for any family.

In the wars and troubles which followed the Conquest, Robert, the head of the family, acquired Berkeley and many broad acres besides; and there was a Berkeley lordship which included half or more than half of Gloucestershire and Cowley, with many other manors. But the poor relation was to be provided for. He, too, was descended from Prince Squantiber I.—or was it Ealnoth the staller?—and to him, as tenant under his great brother or cousin, Cowley was assigned. There was a Sir Richard Cowley of Cowley, and there were other good men and knights of the race, one of whom was closely related to the mother of Sir Richard Whittington. Eventually, however, the line seems to have failed, and the manor, always, be it understood, under Berkeley, was given to Pershore Abbey. The Abbot put in a tenant, but we hear nothing of him or of his until the dissolution of the monasteries, when Cowley was made by Henry VIII. part of the endowment of the new Bishopric of Westminster. There was only one bishop, Thurlby by name, and Cowley changed hands once more. In the reign of Queen Elizabeth it belonged to the Bridges family, who sold it to Henry Brett. To him it owed the first important manor house. He placed it close to the church in 1674, from which we may safely gather that he chose the old site for his new house. Some say that the first parish churches were always the chapels of the manor houses, and the first parsons the chaplains of

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COWLEY MANOR.

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the lord of the manor. We find, accordingly, here, as in so many other places, the church beside the house, and the tombs of the lords, when they were borne to their last rest, were close to the scenes they had loved in life. The monuments of at least a dozen, their names unknown, their inscriptions and their shields defaced, were still to be seen before a "restoration" in 1873 which hid or destroyed all but one. The church and the house are situated in some of the best scenery of a lovely district near Cheltenham, at the edge of a steep declivity 800ft. above the sea. It is on a kind of peninsula formed by two of the seven streams which are reckoned the sources of the Thames. The greatest advantage has been taken of the declivity to make terraces, and of the nascent Thames to make cascades, lakes, and ornamental fountains. The grassy slopes face to the south, and the opposite hill of park-like land is crowned with fine old trees, through which a ride to the summit is marked by an old-fashioned straight avenue. Mr. James Horlick has rounded off the park and pleasure-grounds by purchase chiefly, and has planted, it is locally reported, some 700,000 trees—forest oaks and beeches in the park and by the water's edge, as well as arbutus, various laurels, yews, and other shrubs on the walks and by the fountains. The result is not only already satisfactory, but is becoming more so every year.

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The house stands to westward of the church, the tower almost touching the eastern wing; but the edge of the churchyard is marked by a fine old yew tree, reminiscent of the days when the stout knights who now sleep at its feet drew the long bow from its branches. One of the last owners, whose name was Hutchinson, first laid out the terraces, and built a square Italian house on the site of the manor house of the Bridges and Bretts. It is not always possible, either in the house or outside, to distinguish the work carried out by that proprietor and that designed for Mr. James Horlick by Mr. R. A. Briggs, the architect to whom the new buildings were entrusted, as their initials are the same and occur in a few places. The fine western gate pillars, forming an exit from the principal court,

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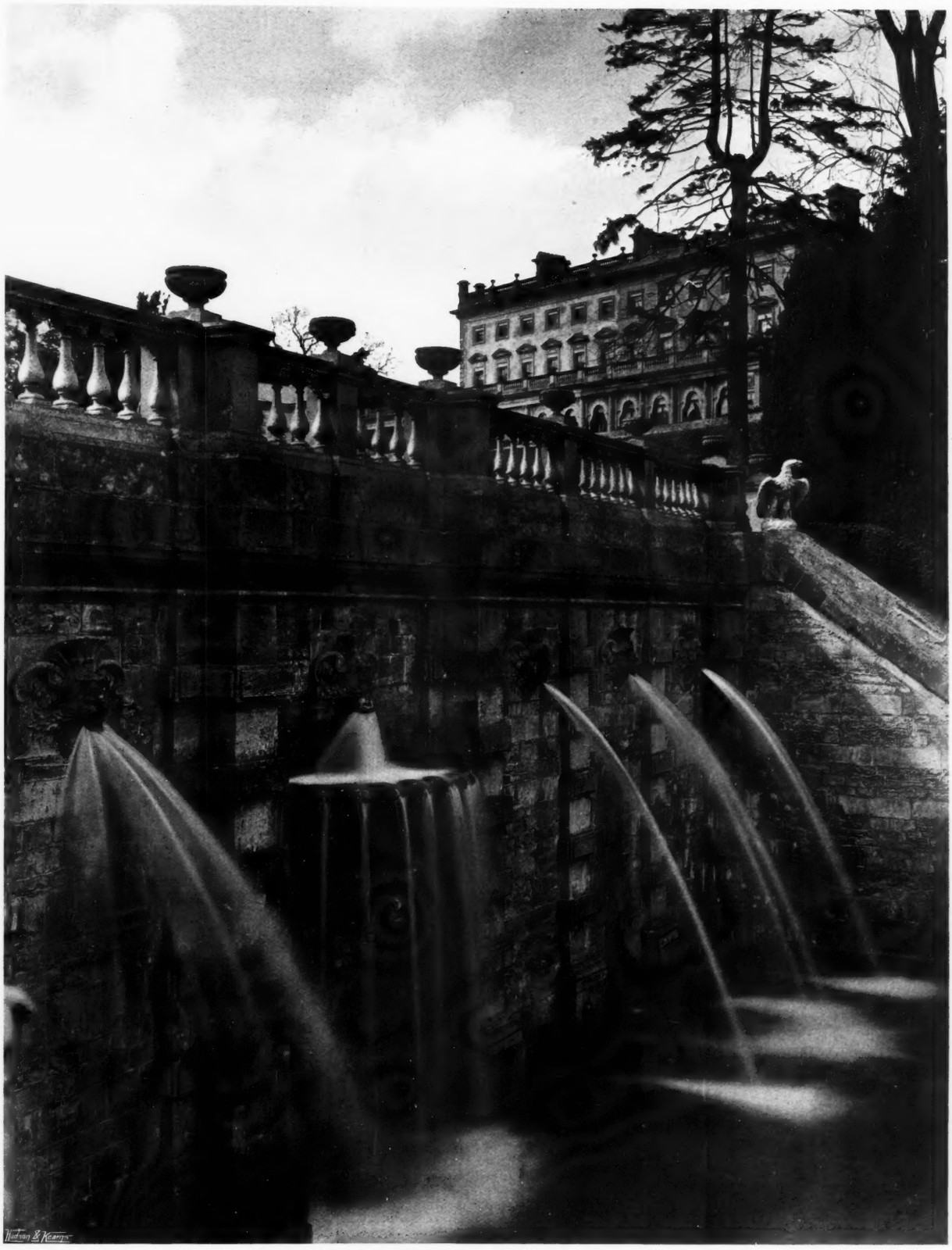

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BELOW THE FOUNTAIN TERRACE. "COUNTRY LIFE."

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A WATER STAIRWAY.

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are crowned with carved figures of wyverns, the Hutchinson crest. The house, as built by this owner, was of five bays, and had a portico, Tuscan Doric, in style, of three bays. Mr. Briggs, retaining the house only without the portico, built an extremely ornamental shell-roofed doorway as the main entrance, and added six bays to the old house, which was extended westward to meet the Hutchinson gate-posts. Much other building took place both in the kitchens and offices and also in the stables and a long series of workshops, connected with the supply of fresh water, with the electric lighting, with the motor-vehicles, and with half-a-dozen other appliances which, a few years ago, would all have been summed up under the term "carpenters' shops." In this direction, too, are the garden sand hothouses, disposed on the slopes of the hill so as to utilise every advantage of aspect, for, with all the daily expenditure, there is no waste. A village of cottages rises beyond, all built by the lord of the manor, who employs the whole of the labouring population of the parish. The farm contains the famous Cowley herd of shorthorns, some lovely animals being visible from the house, feeding on the opposite slopes. There can be little question that in an English park cows are more ornamental than deer. The hall and staircase and the corridor, which forms a picture gallery, occupy what remains of the old house. Here also is a beautifully decorated boudoir, for which a former owner brought over foreign workmen some fifty years ago. But the best work in the house is the wood-carving, executed by local artists, the new dining-room,

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panelled in mahogany, being ornamented with exquisite festoons and cartouches in pear wood, in a style which Wren and Grinling Gibbons made popular a couple of centuries ago. The ballroom is well proportioned, being 65ft. long by 32ft. in width, 25ft. high, and large enough to hold some 400 people. It would be impossible to enumerate the art treasures which meet the eye in the reception-rooms, the best old Worcester and Chelsea china being in Chippendale cabinets of remarkable beauty. To many admirers of old furniture, however, the Sheraton and Hepplewhite wardrobes, which appear in the bedrooms, form the most distinctive feature, and are more than enough for a long day's study in themselves. But the most pleasing feature is that indescribable quality which makes the whole house eminently homelike. This comfortable aspect of the place is much enhanced by the flowers, especially the roses, everywhere to be seen; while the chattering parrots and macaws and other pretty birds add life and colour to the scene. Nor should the water-fowl be forgotten, including Australian swans (Nigroque simillima cygno) which disport themselves on the lake, and, in defiance of the foxes, bring up their nestlings on the islands. Returning to the house from among the shady walks below, the suitability of the Palladian style, as interpreted and adapted to the English landscape by Inigo Jones and Wren, becomes apparent to the eye. This view of the house, crowning the hill, from the south, will remind a visitor of Barry's front to Cliveden, further down the Thames. The addition here includes the five bays of the older house, and is continued westward to a very beautiful Ionic colonnade, or alcove, which opens from the picture gallery and other reception-rooms. Here the view of hills and woods, green pastures and rippling water, with the terraces in the foreground, is simply enchanting. In the valley below to the right rises one of the seven springs which form the source of the Thames. The others are on the eastern side of the park, but this one, shaded by a clump of

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dark oak and beech, rises bubbling up from under the hill in ceaseless flow, and, crossing the foot of the slope below the terraces, mimic becomes the waterfall and fountains seen in one or more of our views. Below that point it is joined by the eastern affluent already mentioned, and, falling into a long lake among the hills, issues at last as the Thames. Could Sir Richard of Cowley, the grandson of Squantiber I., be resuscitated from his tomb in the adjacent church, how he would stare to see the work the infant Thames is called upon to perform before he is allowed to begin his journey to the Nore!

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A PAIR OF DIPPERS . . . . IN SPRINGTIME.

IN a certain delightful corner of England there is a clear, swift-flowing stream, which, tumbling down from the hills with a rush and a whirl, rolls for several miles through the heart of wide-spreading woods. On its mossy banks primroses, bluebells, and columbines bloom in turn, and look down through the clear water at the glistening gravel beneath. In one place the stream falls over a series of high, grey rocks, causing miniature cataracts, and tossing clouds of silver spray high in the air, and afterwards dashes through a narrow gorge, lined with shiny boulders, on whose summits the grey lichen strives to obtain a foothold. A few dark pines bend low over a deep, dark green pool, which seems strangely still and silent after the bubbling and rushing of the upper waters. A little lower down a flat rock stands out of the stream, covered with delicate ferns, and catching the rays of sunlight through the open arches of green; just beside it another spring comes leaping and flashing up from its bed of pebbles and crystal quartz grains to join the main rivulet, and in its company go dancing through the woodland glades, and fill with its own rippling music the fields and moors below.

This stream, with its surrounding glades, is a mine of treasures for naturalists; on its banks delicate white butterfly orchis flutter their petals in the breeze; gorgeous fritillaries

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THE SOUTH COLONNADE.

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float through the trees, rich splashes of orange in a world of green; while the geologist could find many gems, such as sparkling crystals, glowing with the richest tints, hidden in the bed of the laughing stream; but more interesting than these are the feathered inhabitants of the wood. Just past the little ravine, where the rivulet enters a stretch of bleak, open moorland, year by year a pair of dippers build their nest. One day, walking along the bank searching for nests, I saw two patches of whitest snow bobbing up and down on a boulder not far distant. On nearer approach I perceived a pair of dippers performing their courtship, the patches of snow being their pearly breast feathers. The male bobbed up and down, flaunting his white shirt-front in the sun, fluttering his wings, and at intervals giving vent to a short, but brilliant song, wren-like in character; while the female sat watching with her beady eyes, occasionally preening the dark plumage of her back and wings. At short intervals the cock darted into the stream and disappeared for an instant, to emerge (shaking the drops from his feathers) and head for the bank, where he plumed himself and called softly to the hen. He would then proceed with his courtship, and all the time the little hen sat watching and scarcely moving. Suddenly a brown mass appeared above them: perfectly balanced on outstretched pinions, head and tail extended horizontally, a sparrow-hawk hovered over his intended prey. Like a flash of lightning the male dipper darted away straight for the shelter of an overhanging bank, but the female, instead of following his example, remained motionless, gazing, as if fascinated, at the bold, dark enemy overhead. Suddenly the hawk swooped, with a single beat of its powerful wings, but just in time the dipper flung herself off the boulder. Uttering a short, sharp cry, with head thrown back, she made for the open country. This gave her cruel pursuer the advantage, and it again prepared to swoop; the dipper saw the movement, and doubled with extraordinary swiftness. So interested was I in the contest that I half-raised myself from the tangle of brushwood among which I had hidden on first perceiving the birds, and saw the other dipper close beside me; he, entirely forgetting his own danger, was frantically calling to his companion in plaintive, long-drawn notes, and flying wildly from bush to bank and back again. The hen was evidently bewildered by the hawk's pursuit, for she never attempted to gain the shelter of a shrub, but kept scudding up and down over the surface of the water. But she was beginning to get tired, and no longer doubled with the same precision and swiftness, while the bird overhead floated to and fro, flapping its great wings quietly, almost lazily, watching its victim with wide open eye, but not seeming to exert itself in the least. Seeing this, I thought it was time to interfere, and was about to do so, when a strange thing happened: quite suddenly, and without hesitation, the male dipper shot out from the bank straight under the hawk, which swerved aside as if to swoop, thus giving the female a chance of escape. Unfortunately, the keen-witted hawk had no intention of pursuing the second bird and allowing the first, who was already tired, to escape. Giving three or four quick beats of its broad wings, it dashed down towards the water with frightful swiftness, and, in spite of the agonised flutters of the kind little mate, would have caught its prey had not a missile intervened. Starting up from the ground, I seized a stick and threw it at the hawk, at the same time shouting and waving my arm. This had the desired effect; the hawk swept up, paused a moment in mid-air, and then flew away, propelling itself swiftly by easy strokes of its pinions. When I looked round the dippers had disappeared, and guessing that they would remain in hiding for some time I left the glade.

When I returned a few days later the pair were busily building a nest, and their courting days were over. The cock had won his mate, and he deserved her, after his bravery in trying to defend her from the hawk. The nest was placed in a hollow in the bank, beneath the shelter of a projecting piece of rock. Each day I watched the birds at work, and in time they got used to my presence, so that it was no longer necessary to hide, and I was able to sit quite openly on the bank. The hen did most of the building, and the cock brought the materials; he was very energetic, and flew swiftly to and fro, bringing grass, leaves, sticks, and even hair, which the forest ponies had left sticking to the heather. His mate was distinctly lazy; she often neglected the nest for an hour or so, and amused herself by dipping in the stream in search of grubs and water larvæ, lying hidden among the pebbles at the bottom. It was very pretty to

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COWLEY MANOR: THE TERRACE, LOOKING WEST.

"COUNTRY LIFE."

watch her dash into the water, scattering drops to right and left, and leaving widening circles of ripples behind her, and reappear with the sunlight gleaming on her dark upper plumage, bringing out lights of glossy green and bronze amid the black. The poor little cock would gradually amass a pile of materials, and then, in despair, would give chase up and down, round and round, now flitting through the bushes, now scudding through the water they whirled, until the hen was persuaded to continue her work. She was also fastidious and difficult to please, often refusing the rougher grasses and longer twigs her mate brought. This led to quarrels, and sometimes they attacked each other, first standing, plumage ruffled and heads lowered, and then hurling themselves one against the other, just like a pair of bantam cockerels. The disputes were soon made up and the work continued. One day the cock found a delightful piece of loose heather, and instantly determined to utilise it for the nest; but it was too large to carry whole, and too tough to break, and as it was very wiry, he finally got all tangled up with it. His cries of distress brought his mate to the rescue; she first tugged frantically at the heather, and, finding that useless, seized hold of the cock's claw and pulled with might and main. At last, after losing many feathers, they disentangled it, and carried it in triumph to their nest. The next day I noticed that it occupied a prominent position in the roof of the nest, and stuck out in a curious manner, but by the afternoon it had disappeared; whether the wind had blown it away, or the birds had discarded it as being unmanageable, I cannot say. In ten days the nest was finished; it was a curious structure, almost as wide as it was high, very loosely put together, made chiefly of thick, tough grass and moss, with an untidy opening at one side, the whole resembling a shaggy ball or bunch of leaves and grass, with a few odd sticks interlaced. Inside it was neatly rounded and lined with finer materials, among which I detected one or two hairs and a single large brown feather, probably belonging to a pheasant. I had watched the hen moulding the interior into the correct shape. She sat down, with wings slightly extended, and proceeded to turn round like a top, modelling the walls with her own soft body. Five eggs were laid, but the hen broke one in getting out of the nest; she seized the broken shell in her bill and flew away with it, while the cock followed, calling in an excited manner. I was afraid she might desert the nest, so, in her absence, I cleaned out the broken bits of shell and the yolk. The eggs are rather large for the size of the bird, which measures 6¼in. from the tip of its black bill to the end of its short square tail, being about the size of, or a little larger than, those of the red-necked phalarope; they are cream coloured, with no gloss, and are pyriform, being large at one end and tapering down to a point at the other.

When the hen returned she hopped about a little in front of the nest, but finally entered and settled down on the eggs. All through the period of incubation she was flighty and apt to fly off suddenly to play in the stream, thus giving the cock great anxiety, but when the first chick was hatched she became the most devoted little mother, and would scarcely allow her mate to approach the four little skinny blind creatures lying huddled up in the bottom of the nest. Presently downy hairs appeared on their bodies, and soon they were covered with a thick coat of dark brownish down, which, in its turn, gave place to feathers, but long before they had their full plumage they were out of the nest and bobbing up and down on the bank. Their parents were energetic in getting them food; again and again they returned, their bills full of grubs, but their offspring were never satisfied. Should the mother bird pause a moment from her labours to plunge beneath the water, they began crying plaintively to her. They were taught to fly by their parents flitting from rock to rock, holding fat, appetising worms in their bills, and calling to their young to follow; for some time they refused, but, finally, one made a desperate effort, and practically jumped to the next boulder. Of course he was rewarded with a grub, and the others soon followed. After that they might be seen daily flying clumsily among the bushes or over the rocks; but not until they had their full plumage, and could fly quite easily and gracefully, did I see them dive. I was very anxious to see how they were taught to do this—surely not like the great crested grebe, which takes its young on its back and plunges with them under the surface. For a long time I watched in vain; though the parents tried by every means in their power to induce them to follow their example, the young were obstinate and refused to enter the water. Their diving began by an accident: the whole family were seated on the afore-mentioned flat slab of stone, covered with ferns; two of the young were fighting vigorously, and, gradually nearing the edge of the rock, suddenly one fell over and disappeared beneath the surface. The others set up such a calling, and both parents darted in after their chick. Soon all three reappeared and fluttered back to their "landing-stage," and that afternoon all the young birds began to dive. At first they plunged too deeply, and came up spluttering and choking, but soon they managed to follow their parents' example, and just pass quietly under the surface. During the diving lesson the parents dived with their young, flew beside them, and chirped encouragement. That night they left the nest for the first time. Returning home from a walk I saw the mother bird perched on a low branch, with all the little ones cuddling under and round her. As I passed softly by a little head peeped out from her breast feathers and a bright eye twinkled up at me, seeming to say—"Good-bye to the old life; we are quite grown up now!"

J. R. Tokr.

A BOOK OF THE WEEK.

PROFESSOR SAINTSBURY, in his history of English Prosody, remarks that "there is nothing quite so null as an insignificant sonnet." Yet it is a form frequently affected by writers who do not understand its limitations and potentialities. The same author gives up in despair any attempt to explain its peculiar charm. All argument on the question is *a posteriori*. We know that the sonnet has been continually used since the time of Petrarch and Dante to unveil some of the deepest thoughts and emotions of poets. Yet the example of Tennyson seems to show that the form is not absolutely necessary. Much of "In Memoriam" could, and doubtless would, have been conveyed in sonnet sequence if Tennyson had lived in the time of Queen Elizabeth. The musings that are set forth in the various elegies are similar in character to those of Shakespeare and his contemporaries, with this difference, that they deal with the passion of grief instead of the passion of love. Incidentally, however, the poet is led to discourse of his deepest and most intimate thoughts in regard to life, its origin, its destination, and its purposes. If we look at the signs by which, according to Professor Saintsbury, a good sonnet may be known, we shall see how suitable it would have been for the delivery of Tennyson's meditations. He says the language should be striking and forcible or exquisite. There should be no meandering, no *clichés*, no expletives. As a motto to the volume now before us, *A Book of English Sonnets* (Wellwood), the anthologist has placed a sonnet by Eugene Lee-Hamilton. It runs as follows:

> Fourteen small broidered berries on the hem
> Of Circe's mantle, each of magic gold;
> Fourteen of lone Calypso's tears that roll'd
> Into the sea, for pearls to come of them;
> Fourteen clear signs of omen in the gem
> With which Medea human fate foretold;
> Fourteen small drops, which Faustus, growing old,
> Craved of the Fiend, to water Life's dry stem.
> It is the pure white diamond Dante brought
> To Beatrice; its saphire Laura wore
> When Petrarch cut it sparkling out of thought;
> The ruby Shakespeare hewed from his heart's core;
> The dark, deep emerald that Rossetti wrought
> For his own soul, to wear for evermore.

Now one somewhat doubts if this description be not couched in too light a vein. The repetition of the word fourteen is one of those devices to secure emphasis that seems to be out of place in a sonnet. At any rate, if we turn to the more austere muse of Wordsworth we find that he discarded such artifices for winning the ear and attention. Yet he achieved a success that is extraordinary. There are in the following sonnet one hundred and six words only, yet they contain a history and theory of one of the finest forms of verse invented by man.

> Scorn not the Sonnet; Critic, you have frown'd,
> Mindless of its just honours; with this key
> Shakespeare unlock'd his heart; the melody
> Of this small lute gave ease to Petrarch's wound;
> A thousand times this pipe did Tasso sound;
> With it Camoens soothed an exile's grief;
> The Sonnet glitter'd a gay myrtle leaf
> Amid the cypress with which Dante crown'd
> His visionary brow; a glow-worm lamp,
> It cheer'd mild Spenser, call'd from Faery-land
> To struggle through dark ways; and, when a damp
> Fell round the path of Milton, in his hand
> The thing became a trumpet; whence he blew
> Soul-animating strains—alas, too few!

It would seem easy at a first glance to write fourteen lines of verse making just about one hundred words in all, yet it is in reality as difficult as it was to make Giotto's round O. In a sonnet the slightest deviation from absolute truth and sincerity at once becomes visible. The anthologist in this book declares that the choice made is a personal one, and

that the criterion of selection has been "beauty of diction, together with adequacy of motive." He also claims to have erred on the side of exclusiveness, and that he has endeavoured "to include nothing that is not of the best." One somewhat doubts the force of this declaration when confronted on the first page with Sir Thomas Wyatt's "Unstable dream, according to the place." Wyatt played a very important part in the history of the sonnet; but, as a matter of fact, his finest work was lyrical in its character, and he was not highly successful with the form that he had brought from Italy to England. Almost the same criticism would apply to the Earl of Surrey. It is not until we come to Sir Philip Sidney that we discover the English sonnet in all its beauty. "With how sad steps, O Moon, thou climb'st the skies," and "My true love hath my heart, and I have his," are two examples that cannot possibly be omitted from any representative anthology of the kind. Those from Thomas Watson, on the contrary, are not sonnets at all if judged by form. If their form had been perfect they would still have remained very indifferent poems. The sonnet sequence in vogue during his time does not seem to have been a highly suitable form of expression for him. Shakespeare, on the contrary, conquered it, but that was probably because he was able to move with equal freedom in any kind of chains. A modern poet has recently made the remark that in blank verse Shakespeare could have said what he had to say much better than he has done in the following sonnet:

> That time of year thou mayst in me behold
> When yellow leaves, or none, or few, do hang
> Upon those boughs which shake against the cold,
> Bare ruin'd choirs, where late the sweet birds sang.
> In me thou see'st the twilight of such day
> As after sunset fadeth in the west;
> Which by and by black night doth take away,
> Death's second self, that seals up all in rest.
> In me thou see'st the glowing of such fire,
> That on the ashes of his youth doth lie,
> As the death-bed whereon it must expire,
> Consumed with that which it was nourish'd by.
> This thou perceivest, which makes thy love more strong,
> To love that well which thou must leave ere long.

But in this sonnet, as in the others, we have not only the Shakespeare of the plays and the Shakespeare who wrote "I am fallen into the sere, the yellow leaf," but the man revealing his most intimate and personal thoughts. In fact, the sonnet is one of those forms in which character and style prevail over everything. How clearly is the poet of "Paradise Lost" revealed in Milton's magnificent sonnet on his blindness:

> When I consider how my light is spent
> Ere half my days, in this dark world and wide
> And that one talent which is death to hide,
> Lodged with me useless, though my soul more bent
> To serve therewith my Maker, and present
> My true account, lest he returning chide;
> "Doth God exact day labour, light denied?"
> I fondly ask: but Patience, to prevent
> That murmur, soon replies, "God doth not need
> Either man's work, or his own gifts. Who best
> Bear his mild yoke, they serve him best. His state
> Is kingly; thousands at his bidding speed,
> And post o'er land and ocean without rest;
> They also serve who only stand and wait."

It was a favourite of Wordsworth, who surely is entitled to rank as one of the most competent of judges. How beautifully his own genius stands out, as in some small but perfect piece of sculpture, in the sonnet to Sleep:

> A flock of sheep that leisurely pass by,
> One after one; the sound of rain, and bees
> Murmuring; the fall of rivers, winds and seas,
> Smooth fields, white sheets of water, and pure sky;
> I have thought of all but turns, and yet do lie
> Sleepless! and soon the small birds' melodies
> Must hear, first utter'd from my orchard trees;
> And the first cuckoo's melancholy cry.
> Even thus last night, and two nights more, I lay,
> And could not win thee, Sleep! by any stealth:
> So do not let me wear to-night away:
> Without Thee what is all the morning's wealth?
> Come, blessed barrier between day and day,
> Dear mother of fresh thoughts and joyous health!

Among so many gems it is difficult to select the best, but the present writer would be inclined to say that very few finer sonnets have been written than that beginning "Earth has not anything to show more fair." It might be described as flawless, at any rate, from the beginning down to the concluding couplet:

> Dear God! the very houses seem asleep;
> And all that mighty heart is lying still!

And yet in glamour and thought it seems to be at least equalled by

> The world is too much with us: late and soon,
> Getting and spending, we lay waste our powers.

Here speaks the prophet of his time, and the very spirit of poetry seems to breathe from the last lines of it:

> Great God! I'd rather be
> A Pagan suckled in a creed outworn:
> So might I, standing on this pleasant lea,
> Have glimpses that would make me less forlorn;
> Have sight of Proteus rising from the sea,
> Or hear old Triton blow his wreathed horn.

It is rather a shock to find, on turning the page, that this beautiful sonnet is followed by some doggerel verse of Lamb's, wherein we see a man of genius, at one of those uninspired moments that come to all, treating a light theme in a form thoroughly unsuitable to it. Imagine what opinion anyone would form of the gentle Elia if they knew about him only the fact that he had written this so-called sonnet on women's names. Those of Keats have a beauty equal to that of the best, but they just fail in that energy of thought round which the lovely phrases of Shakespeare and Wordsworth are a splendid blazonry. One half of the book is devoted to the work of living writers, but it serves chiefly to illustrate the fact that very few of them have obtained a grasp of the real nature and purpose of the sonnet. It ought to be added that in binding, form, and print the book is simply charming.

LONDON'S CATERPILLAR PLAGUE.

WITH the almost unprecedented plague of caterpillars of the Vapourer moth (Orgyia antiqua) with which Hyde Park and Kensington Gardens have been afflicted this summer, the cynically inclined Londoner has had abundant opportunity of making jest of the joys of country life. In the country itself, however, the chances of such abnormal visitations are remote, from the mere fact that at a distance from the towns there are no artificial checks imposed on Nature, so that when one kind of living thing—as this caterpillar—shows an inclination to become too numerous, there are generally enough of those other creatures whose business it is to feed upon it to keep its multiplication within bounds. In London, on the other hand, Nature is always handicapped by human interference; and with all the inducements that we can hold out to them, it is not easy to tempt sufficient insect-eating birds to make their homes in the parks and public squares to keep the balance properly adjusted.

THE VAPOURER MOTH.
Female and male.

During the whole of July the number of the caterpillars which swarmed about the park and gardens was prodigious. They were, of course, more or less confined to the immediate proximity of the trees on the foliage of which they feed; but, unfortunately, the Vapourer is an insect of almost omnivorous appetite. Most caterpillars restrict themselves to one particular food-plant, or to the leaves of a few allied species; but the Vapourer will eat nearly anything. In the park the plane trees, elms, limes, hawthorns, alders, and laburnums suffered almost equally, though the ravages are less noticeable on a large umbrageous plane, with its masses of wide-leaved foliage, than on smaller trees with less leafage, and where that leafage is more easily within range of the eye. Thus some of the smaller laburnums stand at this moment stripped almost as if it were midwinter. Many young limes are no more than skeletons of their proper selves, and the naked appearance of certain hawthorns approaches the scandalous.

Meanwhile the caterpillars have swarmed everywhere. Every high wind blew them down to the ground by cupfuls; and it is, moreover, the nature of the creature, when the promptings of its instincts tell it that it is time to be thinking of turning to a chrysalis, to descend from the branches of the tree on which it has been living. Then it either walks down the trunk or, dropping first to the ground, wanders about until it finds some suitable position, on a neighbouring wall, post, or paling, where it can spin its cocoon under a ledge or on an inequality of the

surface, there to vegetate peacefully through its period of quiescence in the chrysalis stage. So by about the first week in July, when the caterpillars began to be full grown, they commenced to appear on the level. They crawled in processions down each tree trunk. They swarmed upon the ground. They climbed up every post and railing, and up the legs of each chair and bench. Along Rotten Row it was impossible to lean anywhere upon the rails without a preliminary inspection, unless one wished to have squashed caterpillars upon his person. Some of the posts were so covered with the insects as to look almost woolly. No man or woman could safely sit on any seat for even a few minutes and then walk away without first calling in the assistance of somebody else to wipe the caterpillars off his, or her, back. On one seat only 200yds. or so from Hyde Park Corner, we counted forty-two caterpillars in plain sight, and undoubtedly the number not in sight—behind the back and underneath the seat—was greater than the number visible. To anyone unfortunate enough to have a "horror of caterpillars," Hyde Park has not this year been a pleasant resort.

TWO TREES IN THE PARK THAT HAVE SUFFERED.

One of the peculiarities of the Vapourer moth (it is, although so common, an interesting insect to entomologists in various ways) is that, like some vegetables—as orange trees—it does not all come into blossom, as it were, at once. That is to say, most insects go through the various stages of their existence with regularity, so that at one season they are all caterpillars, and then in a few weeks they are all chrysalides, from which in turn the perfect insects hatch almost simultaneously, so that the moths are all on the wing together, and, having performed the functions allotted to them, they die at nearly the same time. In the case of the Vapourer the eggs hatch irregularly over a period of some weeks, the consequence being that while some caterpillars are still young, others have passed through all their stages and are already moths. This peculiarity became very apparent in Hyde Park by the third week of July, when the caterpillars were swarming in seemingly unabated numbers. At the same time every tree trunk was dotted with the little yellowish white patches of silk, about the size of a blackbird's egg, which showed where the chrysalides of more precocious insects were already dormant. Finally, the most progressive of all had actually reached the final stage, and here and there along the railings of the Row, or zigzagging about in the bright sunshine, one could see the male moths flying—pretty bits of bright chestnut colour, like animated autumn leaves on the wing.

CATERPILLARS AND COCOONS ON POST.

For, again, the Vapourer is remarkable for being one of the dozen or so species among all the British moths of which only the male insects have the ability to fly. The females are what is called "wingless," that is to say, their wings are so rudimentary — like those of a lepidopterous penguin—as to be useless as instruments of locomotion. The female Vapourer, indeed, hardly even walks, for her body is so large and her legs so feeble that without wings she is ill-adapted to progress of any kind. When she hatches, she remains sitting complacently on the little yellowish white cocoon, where the male finds her. There she stays, lays her eggs on the cocoon, and so dies where she was born without having travelled half an inch in all her life. Anyone now can find these female moths—though no one not an entomologist would suspect that they were moths—sitting on the empty cocoons upon the tree trunks, or under the ledges of the posts, railings, and seats all over Hyde Park. Very different from the handsome males, with their tawny wings splashed each with one white eye, the females hardly look like insects, but rather resemble a female sallow catkin or willow blossom, with a crawling apparatus at one end—small blobs of soft grey down, which are, indeed, little more than a flask for containing and producing eggs.

This incapacity of locomotion on the part of the female makes it necessary that the male should do all the wooing, and should be able to find her in whatever corner she is hidden; and with this object the female Vapourer possesses, in a degree which is equalled, perhaps, only by one other moth, the power of what is called "sembling." It is now fairly established that the sense by which the males are guided to the female is that of scent, but to such an amazing degree is it developed that many naturalists are still inclined to believe that the insects are possessed of some new sense—some quality akin to the "feeling of the North"—of which we human beings are destitute. Anyone who wishes can test this wonderful faculty for himself by simply collecting a few of the cocoons containing chrysalides from the trees in Hyde Park. As soon as the female moth hatches from one of these chrysalides

let it be exposed (in a pill-box with the lid taken off and a piece of muslin or leno stretched over the top, held by an india-rubber band, in place of the lid) in a garden or on a window-ledge at almost any time when the sun is shining. It may be miles away from Hyde Park, or from anywhere where the moths are known to exist; but that female will not be long exposed to the open air before—one cannot guess whence they come—the males will begin to appear, like brilliant chestnut-coloured little butterflies, fluttering about the box in which she is placed. If she be left there and no male allowed to reach her, there may soon be a dozen or more flickering about the box at once. Nor is it necessary even to expose the box as much as this. If the owner will carry it in his pocket and take a walk in Hyde Park he will soon find that the males have discovered the presence of the lady, and they will come and flutter about him and settle on his coat. The moth in the box is, of course, quite invisible; and it certainly makes no noise, sitting, as it does sit, motionless in one spot. Yet so mysterious is the appearance of the males, even though the box be taken to the most unlikely places, that it is certain that they must be able to discover the existence of the female, and to find their way to her, at a distance of some hundreds of yards, and, apparently, even of a mile or two, however incredible that may seem.

Interesting though the moth may be, however, it is certain that the caterpillar (although with the yellow tufts along its back it is not in itself unbeautiful) when in any such numbers as are just now afflicting London is distinctly a plague. The hairs which give it such attractiveness as it has are in themselves more or less poisonous and capable of setting up an annoying irritation in a delicate skin. If the caterpillar or cocoon is carelessly handled, the hairs will cling to the fingers. The skin of the human fingers is too thick to be pierced, but from the fingers it is easy for the hairs to become transferred to more sensitive places, especially into the corners of the eyelids, when a local irritation will be felt which will often develop into something approaching a "stye" in the eye. But even without this property, a caterpillar is an unpleasantly crawly thing to have about one's person, while the ravages in the trees are far from being an improvement to the landscape. It is therefore fortunate that these plagues rarely continue from one year to another. What the precise conditions are which result in the extraordinary multiplication of a given insect in a certain season, entomologists are not able to say with certainty; but it by no means follows that because an insect is especially plentiful in one year it will be equally plentiful in the next. Nature—even under the artificial conditions of London—has her own way of applying checks; and it is evident that if the creatures were permitted to multiply normally in the natural ratio of increase, each female producing a hundred or more eggs, in a very few years London would become almost uninhabitable. But Nature will not suffer that. Just as the favourable (presumably climatic) conditions have resulted in the unusual abundance of the caterpillars this year, so adverse conditions of climate may make them scarce next summer.

None the less, it would not be amiss if Nature were to be assisted in her work. Already the sparrows of Hyde Park are doing their best. Few birds can eat the caterpillars themselves, the hairs evidently not being to their taste; but almost any insectivorous bird will eat a Vapourer moth. The females are easy to catch, and the sparrows are busy now searching the railings and tree trunks for the plump little morsels; while, though the male, with his vigorous and erratic flight, is an elusive thing, the sparrow often manages to catch him, and on the grass in Hyde Park and the gardens now the sparrows may be seen feeding on something, and the bit of a chestnut wing adhering to the birds' beaks frequently tells what that something is. Other birds there are, doubtless, which, especially in the early morning, help the sparrows; but, as has already been said, it is in its lack of the shyer insect-eating birds that London suffers in emergencies of this kind in comparison with the country.

If man is to contribute to the wiping out of the pest, now is the season to do it. Hundreds of thousands of the caterpillars have, of course, been destroyed, either on purpose by the employés about the parks, or more or less accidentally by the public; but it is when the creatures are in the chrysalis stage that they are most vulnerable. The cocoons make fairly conspicuous objects on the tree trunks, on the rails and benches, and they are easily destroyed with the gloved hand, with a rag or piece of cloth, or with a stiff-bristled besom, and it is now that they should be attacked. Especially should every dumpy little female moth sitting on her cocoon be squashed remorselessly before she has time to deposit her eggs.

HYBRIDISATION.

By Professor G. S. Boulger, R.A.C.

In celebrating the jubilee of the coal-tar industry chemists have lately been commemorating a great commercial result of the study of pure science. We may confidently prophesy a similar result from the study of the laws of heredity. "If that is true," whispered a wealthy landowner to me during a lecture on Mendelism, "we should all be millionaires to-morrow." He had missed the point of the lecture, but there was much truth in his conclusion. As the more sober language of science has expressed it, "an exact determination of the laws of heredity will probably work more change in man's outlook on the world, and in his power over Nature, than any other advance in natural knowledge that can be foreseen." This is the conviction that forms the fundamental interest of the International Conference on Hybridisation and Plant Breeding, which has been sitting during this week under the auspices of the Royal Horticultural Society. We have long realised that unity of life which enables us to experiment with plants to elucidate the vital processes of animals; and it is merely the consideration of speed which causes us to prefer peas or rabbits, as our subjects, to elephants or oak trees. Horticulturists are not more concerned in the results than breeders of animals. Every advance in our knowledge is of like importance to both. But the former are a more organised body: a vast number of the plants which they cultivate complete their life cycle within a very brief period; and they were first in this field of scientific investigation. Hence it has fallen to their lot to bring the work now in progress over the whole civilised world to the focus of an International Conference.

It will be readily understood that if a fresh-water polyp be "multiplied by simple division," *i.e.*, if it be cut in half, or if a plant be propagated by means of a layer, a cutting, or by what gardeners term "division of the root," the organisms resulting from each such "vegetative reproduction" will be practically identical; they have but one parent. Such reproduction is, as Huxley expressed it, merely "discontinuous growth." As one branch of a tree will sometimes have leaves differing considerably in form from those on the rest of the tree, so occasional variations do arise in these methods of vegetative multiplication; but they are rare. It is obviously very different when the element of sex comes in. The offspring has now two parents, to say nothing of the remoter influence of its two series of ancestors, and we have, accordingly, competing influences at work. It has even been suggested that the whole object of sex is that variations may arise.

Before the time of Darwin it was generally believed that, though "mongrels," the results of the crossing of varieties of the same species, were fertile, "mules" or "hybrids," the results of the crossing of distinct species, were not so; and, in fact, this sterility was taken as a criterion of the specific distinctness of the parents. Darwin disproved this view; and since his time it has been abundantly shown that hybrids can be obtained between genera as distinct as the cabbages and the radishes, or between a starfish and a sea-urchin. Many groups of plants hybridise freely in a wild state, mulleins and willows being, perhaps, the most striking instances among British plants. Hybrid plants from nearly-related parents, such as mongrels or those within the limits of one genus, are often more vigorous in growth, bloom earlier, more profusely, and longer, and have larger flowers than uncrossed plants. They show a tendency to become double, and to vary in other ways which have made hybridisation of the very greatest practical importance to the horticulturist. Until the last few years, nothing has been known as to any general principle, or law, underlying this variation; but in the year 1900 several workers simultaneously rediscovered and confirmed the overlooked results obtained by Abbot Mendel.

Gregor Johann Mendel was born of a peasant family on July 22nd, 1822, at Heinzendorf bei Odrau, in Austrian Silesia. In 1843 he entered an Augustinian monastery at Altbrünn as a novice; in 1847 was ordained priest; and in 1851 was sent to Vienna to study natural science. In 1853 he returned to his monastery, and became a teacher in the Realschule at Brünn, and afterwards abbot. He died in 1884. His hybridising experiments, carried out in the monastery garden, were mostly with garden peas, and the results, published, in 1865, in the Transactions of the local Natural History Society, were, as we have said, overlooked for thirty-five years. They are briefly as follows: Contrasting characters in the parents of a hybrid are not so blended as to produce intermediate results in the offspring; but in the first generation the characteristic of one parent is exhibited to the exclusion of the other, or, in Mendel's own phraseology, one character is

'dominant" and the other "recessive." In a second generation, obtained by self-fertilising the cross-breeds, 75 per cent. exhibit the dominant, and 25 per cent. the recessive character. In a third generation and in all subsequent generations, these recessives breed true; but in the third generation only one-third of the dominant type breed true. These continue to do so in succeeding generations. The other two-thirds of the dominants of the second generation have a mixed offspring of 75 per cent. dominant to 25 per cent. recessive. Mendel recognised that, of the 75 per cent. dominants in the second generation, only 25 per cent. are pure, the other 50 per cent. being really cross-breeds in which the recessive character is latent.

W. A. Rouch. *A WINNING STALLION, SHUSTOKE MONARCH.* Copyright.

Microscopic study of the nuclei of sperm and germ cells before and after fertilisation has, since Mendel's time, thrown some light on the manner in which the characteristics of male and female parent remain distinct in the offspring; and Professor Hugo de Vries, to whom we are largely indebted for the discovery of the work of the Silesian abbot, has shown that the dominant character is usually an older, or systematically higher, one. Thus, tall forms are commonly dominant over dwarf ones, coloured flowers over white, and hairy plants over smooth ones. Mendel himself, however, recognised the empirical explanation of his law, which de Vries terms that of "the disjunction of hybrids." If each germ and sperm cell is endowed with one of the distinctive characters and not both, and if on an average there are in the offspring of the original crossing an equal number of each kind, Mendel's result might be anticipated; for 25 per cent. "dominant" pollen grains would fertilise 25 per cent. "dominant" ovules, yielding a dominant result (*d*); while 25 per cent. "recessive" pollen grains would similarly fertilise 25 per cent. "recessive" ovules, yielding a recessive result (*r*); and the other 50 per cent. might be expected to be crosses (*dr*), though, until bred from, apparently dominant. De Vries states the law as the equation:

$$(d + r)\ (d + r) = d^2 + 2dr + r^2.$$

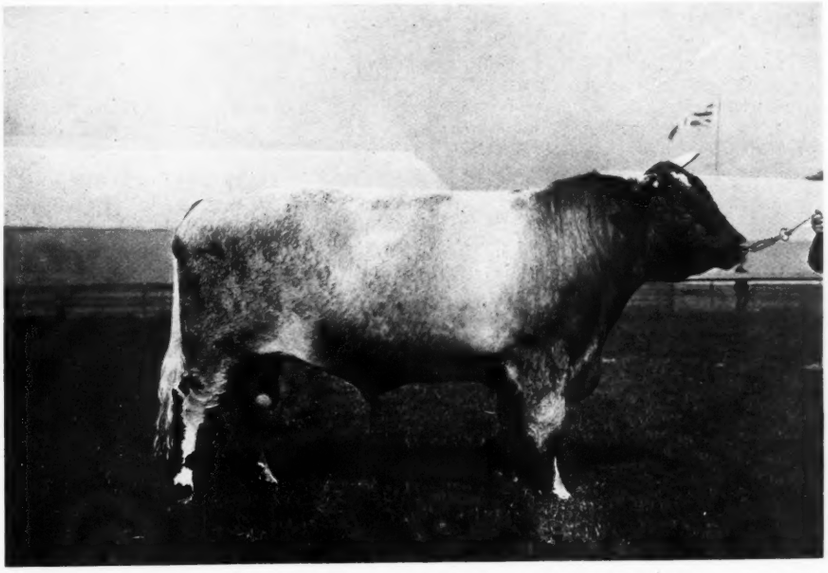
When, in 1899, the first International Conference was held in London, Mendel's researches were unknown. In that year Professor Spillman of Washington began experiments with two species of wheat, which have since been shown to be in full accord with the Mendelian law. When the second conference met at New York in 1902, Mr. Bateson, the president of this week's gathering, was able to say: "We have lost for ever the conception that fixity of character is solely or chiefly a function of the number of generations during which that character has been manifested. . . ." [It] "is, on the contrary, due primarily to the union of similar gametes in fertilisation," [and] "may occur among the immediate offspring of cross-bred organisms." De Vries had then verified Mendel's results in crossing red and white snapdragons, poppies with black and white centres, and other pairs; but now, after another four years, confirmatory evidence is forthcoming with reference not only to maize, stocks, sweet peas, carnations, primulas, and a host of other plants, but also to poultry, rabbits, cats, mice, horses, snails, and other animals.

Other related topics have been before the Conference, but alike from the scientific and the practical side, the results of Mendel's generalisation are of such paramount weight that we cannot think Mr. Bateson guilty of exaggeration when he compared them to those with which Dalton laid the foundation of the Atomic theory.

FROM THE FARMS.

Shires and Shorthorns at Tunbridge Wells.

THE agricultural show at Tunbridge Wells is an institution that has taken a deep hold on the affections of the neighbourhood, and as it was favoured with the most exquisite weather last week, it is no wonder that an enormous gate was attracted. There was some little falling off in the total number of entries, but the show had several characteristics that more than atoned for the slight decrease in numbers. For one thing, the quality was of the best, and for another, it was satisfactory to find the local-bred animals cutting such a good figure. After all, the main object of holding shows is to encourage agriculture, and it is very satisfactory to find that owners and tenants of land are being stimulated to take an active part in these annual competitions. The Shires were a particularly good lot. The first class in the stallion section was for animals foaled previous to 1904 which shall have travelled in Kent, Sussex, or Surrey this year. The first prize went to Sir Walpole Greenwell for his Marden Emperor, by Blythwood Conqueror, a Shire whose bone and substance joined to quality left very little to be desired. In the class for stallions foaled in 1904 the winner was Mr. R. W. Hudson's Shustoke Monarch. Of this stallion we give a portrait that will convey some idea of his size and quality. Mr. Salomons was second with that good horse Norbury Menestrel. In yearling stallions Mr. Max Michaelis came to the front with King of Tandridge, by Lockinge Forest King. In mares Mr. Leopold Salomons brought out his celebrated Childwick Youno, who carried off the first prize for her owner. This mare was also awarded a gold medal given by the Shire Horse Society for the best mare in the show. Mr. Thomas Jones's Marden Fan was the reserve for this. The championship for stallions was awarded to Shustoke Monarch. There was a tolerably good entry of hunting horses, the gold medal of the



W. A. Rouch. *SHORTHORN BULL, ASCOTT CONSTELLATION.* Copyright.

Hunters' Improvement Society going to Mr. Robinson's Good Arm, and the silver medal for the best filly to Mr. Oyler's Mollie. There was an exceptionally good show of shorthorns in the cattle section. In the old bull class the winner was Ascott Constellation, of whom we show a photograph. The winning yearling was Mr. J. Colman's Gatton Baron. In the tenant farmers' bull class, Mr. T. Jones came out first with Marden Douglass. The Colman Challenge Bowl, for the best group of four shorthorns, was won by Mr. J. Colman's entry. Tunbridge Wells is always noted for its show of Sussex cattle. In this section the herd of Earl Winterton was greatly distinguished, and we need say little here about the entries, as we have in type a full account of this fine herd. In the division for Aberdeen-Angus cattle, the championship was won by Lord Fearless, belonging to Mr. W. S. James, while Barbarian, belonging to Mr. J. H. Bridges, took the reserve. The entry of Jerseys was not considerable in point of numbers, but the quality was good. Lady de Rothschild won first and second in the cow class, Mr. Miller Hallett took the honours for heifers calved in 1903, and Sir E. Stern was first in the class for yearling heifers. Of sheep, Mr. Colman brought out the best two-shear ram, who not only was first in his class, but also won the medal for the best male and the Blythwood Bowl. He was also one of the group that won the Colman Challenge Bowl. There was a capital show of Kent or Romney Marsh sheep; Mr. W. Mullen gained the championship. Pigs were fairly represented, Mr. G. T. Inman taking first for aged boars with Highmoor Mikado.

The Approach of Harvest.

At present the country in the Southern part of the United Kingdom bears all the signs of an approaching harvest, yet the haysel is by no means finished. We can still from the railway carriage window see that the mowers are at work in the meadows, men are tedding, and some are carrying. It would appear that this lateness is more frequent on the small than on the large farms. Probably the tenants are to some extent handicapped by the lack of machinery, as one sees them always following old-fashioned methods; but still more by the fact that they give their services to their more considerable neighbours at the beginning of the grass cutting. In the Southern Counties fields of stooks are becoming more and more frequent every day. For the most part oats have been cut first. The wheat and barley are just beginning to ripen. It is a time at which farmers are busily engaged in estimating the possible return. That is more difficult this year than is usual, because rains have been local in their distribution, and where they have fallen plentifully the cereals are naturally much more forward and abundant than where drought has prevailed. There seems to be a general agreement, however, in considering that the average harvest of 1906 will rank to the extent of one or two bushels in the acre less than that of 1905. Generally speaking, there is a complaint of shortage in straw, and this, as it happens, will be a very serious matter, because the hay is considerably less bulky than the average. Thus the stock-breeder will be thrown on a forage made chiefly of chaffed straw, and it is possible that there may be a scarcity of winter keep. Many farmers of a speculative turn of mind are making arrangements to retain as much hay as possible until about Christmas, when they reckon that, especially if the winter should be a hard one, there will be a big demand, and consequently a large increase in the price. It seems likely that in compensation for the comparatively small return of wheat there will be an increase in the price. The average price of English wheat in London continues well over 30s. a quarter. It ranges, indeed, from 31s. to 33s. 6d. In these times, with the aid of labour-saving machinery, it is possible to cultivate our principal cereal at a profit if it can be sold over 30s. Of course, the price in the autumn will be determined more or less by the harvests of foreign countries; but, taking everything into acount, we can scarcely believe it likely that it will fall again below 30s.

SHOOTING.

POINTS ABOUT THE GROUSE DISEASE.

THERE are certain points about the "grouse disease" (as we call it, for want of a better name) which we are apt to look on as isolated facts, although knowing very well that they cannot really be isolated, but that our present ignorance about the whole matter does not permit us to fit them into any of the conjectures which we frame by way of explanation. We do not doubt that they have their own place in the general scheme; only we also know that we do not perceive yet what that place may be. One of these apparently isolated facts is that the cock birds succumb to the disease first. The fact is easily to be ascertained; but we have heard no explanation suggested which seems to fit the fact. It ought, however, to put us on the track of some further enquiries; it is even possible that we shall find this so-called fact itself not always correct. The sexes of grouse vary in the times of their moult. Some have supposed the mysterious disease to be connected in some equally mysterious way with the moult; it is very possible that sufficient care has not been taken, in arriving at the conclusion that the cocks generally die first, to eliminate the effect of such causes as the debility occasioned by the moult. To be accepted as a generally true fact it should be proved true of disease occurring at several different seasons of the year, and we do not know that the requisite care has been taken in this regard. At certain times of year the sexes separate. The females chiefly compose the packs which come down to the cornfields, and the males remain in bachelor parties on the moor at this time. All this may have its effect on the different death-rate of the sexes; and a great deal of investigation would be needed to establish the so-called fact as a general truth independent of their differences of habit.

Another, which has been cited as one of these apparently isolated facts, is that the disease is so often found near the sources of springs on the moor, so many birds being found dead of the disease in their immediate vicinity. But this is a fact which it is possible to link on, conjecturally at all events, with the general chain. The disease, whatever its exact cause, has acute pneumonia accompanied with high fever as one of its most frequent, perhaps its constant, symptoms; and since the water of these springs at their sources is always very cold, it is not unlikely that the grouse should be attracted to these places by the coolness of the water, which would be peculiarly grateful to them when suffering from a heightened temperature. It is said that the disease is carried by water, but the present writer has seen no account of any experiments conducted with a view of establishing this. They do not seem to have been included in the elaborate series of experiments made by Dr. Klein; and any idea that the disease could be communicated from one bird to another by the healthy one drinking of the water which had been infected by diseased birds drinking at it, or bathing in it, is apparently directly contradicted by the fact, which Dr. Klein himself seems to have established, that the bacilli are destroyed by the gastric juices, and are not communicable in food. The theory, however, of those who believe that the disease is carried in water, is that the bacilli may enter the body of the healthy bird through the anal aperture. But this, again, seems to be a theory for which a great deal of patient investigation would be required before it could be accepted as proved fact.

Bad feeding, *i.e.*, frost-bitten heather—for this seems to be exceedingly unhealthy for the young birds—has been suggested as a cause of the disease; but it is far more probable that though this is almost certainly contributory, because it tends to weaken the birds and make them liable to fall victims to any disease which is endemic (that is to say, of which the germs are always there, ready to take advantage of just such weakness), still, that the real cause and origin of the disease is something quite distinct from this. The over-shooting of a moor, which has for its result a good many weakened and wounded birds, which may produce a debilitated progeny, is a very probable contributory cause, like the eating of the frosted heather; and, again, the under-shooting of a moor, with the result of leaving too large a stock, and of leaving the coveys undisturbed in their own family parties and in their native valleys, is again a cause which is likely to be contributory to the spread of a disease which is otherwise originated. It is requisite to take all the general precautions in order to keep birds in a healthy state, vigorous enough to resist the attacking microbes.

In conclusion, it may be noted that keepers often are extraordinarily careless in diagnosing an ailment, and sometimes are heard attributing "grouse disease" as the cause of the death of a bird when tapeworm is only too obviously the most likely trouble to have caused it. It is curious how the tapeworm is often found in birds which otherwise seem perfectly healthy, as if the parasite did them no harm at all, and it is found especially in the young birds; but still it is as well to draw the simple distinction between it and the invisible bacilli of the "grouse disease."

Grouse in the Far North.

GROUSE in Caithness-shire appear to have escaped much of the destruction by the snowfall in spring, which did no little damage to the general stock in Scotland. As a rule, the Caithness moors do not lie very high, so that their moderate altitude would be one reason why they should escape the worst rigours of a Northern winter, or, worse, spring; but the chief reason of the immunity from severe cold so often enjoyed by that far north-western shire is, no doubt, that the Gulf Stream laps round it with a warm current. From one of the Inverness-shire moors the keeper reports that grouse will not be fit for driving until the middle of September, nor does he hold out hopes that there will be many for the driving then; but it is always the part of a wise keeper to be a prophet of ill. If the result is better than his prophecy, his master is so much the better pleased; but when the bags belie his fair promise, the master's disappointment is apt to lead to trouble.

Our Gunnery article this week will be found on page lvi.

ON THE GREEN.

FIRST PRINCIPLES IN LAYING OUT COURSES.—III.

WHEN it is a question of laying out a course where the subsoil is of sand, and even, in a less degree, where it is of a heavier substance, cognisance ought to be taken of the fact that there should be a different principle of construction for the bunkers through the green, and for those which are intended to serve as guards for putting greens. The latter ought to be made deeper and more pot-like than the former. If you do not have your bunkers which are close to the green of this deep and potty formation, they will be hardly any penalty at all to a skilful player out of sand, unless he is tight up under the cliff, and it may be said here, at once, that the floor of every bunker ought to be so graded that it becomes hardly possible for a ball to lie tight up under the cliff. The sand ought to be so piled up and raked down that there shall be a slope back from the bunker's cliff, and the ball which is driven hard into the bunker will then go up against the cliff wall and run back so as to give the golfer a fair chance of dealing with it.

The nearer the hole is situated to the bunker the deeper the bunker may be; and in this respect we may take the pot bunker, so often reviled, just before the Short-Hole-Coming-In at St. Andrews, as a very fine object-lesson. Very often, it has to be admitted, this bunker offends, because care enough has not been taken about the grading of the sand, and the ball may lie hopelessly tight up under the bunker's cliff. But it is such a good little bunker that it deserves the kindly benefit of the doubt, and we will also presume that it has not been dug into desperate holes by the niblicks and boot heels of previous sufferers. Granted all this, it is ideal in two directions, both as a guard to this eleventh hole and also as a guard to the High Hole, on the way out. The Short Hole will very likely be within 6yds. of the ball in the bunker, the High Hole will be some 20yds. from it. And the reason that this bunker is ideal in both directions is that the cliff between the ball and the Short Hole is so much higher and so much steeper than the cliff between the ball and the High Hole. The reason that these are ideal conditions is that it is possible for a fine sand player to dig his ball up the steep cliff, and send it the 6yds. necessary to give him a chance of redemption for the High Hole, and it is also possible for him to dig less deeply, and so send the ball less directly upwards and over the lower cliff towards the High Hole, and make it travel the 20yds. of distance between it and the hole. But it would not be possible to make it travel 20yds. and also loft so steep a face as lies between the ball and the Short Hole. So the practical, and really quite useful, formula which we are able to deduce from this is that a bunker which is a guard to a green may best be made deeper and with a more abrupt face in proportion as it is nearer to the hole. From this, too, we may deduce the principle that in case of a diagonally running bunker as a guard of a hole—as in the case of the Redan Hole at North Berwick, discussed in the last of these articles—it is right that the portion nearest to the hole should be deepest and with the steepest face, both depth and steepness diminishing as it comes farther away from the hole.

This, then, is the kind of bunker which is best adapted as a guard for the green, but, of course, if it be so close to the green as this there must be a way round it for the approach to the hole. Obviously, it would be impossible, except when the green was on a considerable slope against you, or the wind strong against, to pitch on the green over the bunker and stay at all near the hole, and we do not want to set the poor golfer conjuring tricks to perform. But though this is so good a kind of bunker in its right place, it would not be in its right place, nor a good bunker at all, through the green—that is to say, at a long distance from the hole. We have seen that 20yds. is about the greatest distance that the ball can be played out of it, which is practically equivalent to saying that if it were a through-the-green bunker it would cost a man who got into it a stroke. It would cost the first-class player a stroke, and it would cost the second, third, and fourth class players—all, and equally—a stroke each. The fifth-class player it might cost more, but we need not bother about him; he is a bunker to himself, just as virtue is its own reward. For bunkers through the green we want something more shallow and something more wide, and we want it, of preference, with broken edges, little bays and outlets. We may take Hell, at St. Andrews, as an ideal bunker in this respect, as it lies for the Long-Hole-Coming-In. Here the first-class player has scope for the advantage which his skill may give him—he may boldly go for the moderate cliff, or he may hook or slice through one of the openings. A bunker such as this tempts him to take a little risk, to "go for" a big thing. If it were just such a bunker as that which guards the Short Hole there would be no inducement for him to take a risk, no possibility of doing the big thing at all; he would be no better off than the duffer; both would dig out, unambitiously, with the loss of a stroke, and that would be the end of the one as of the other; there would be no fun and no skill about the stroke. These two principles, then, concerned with the formation of sand bunkers, should be clearly kept in mind by the layer out of a course who has a sandy soil to work in: that the bunkers guarding the greens should be deep and small, those through the greens by preference wide and shallow—yet not so shallow as to impose no penalty and make no demand on skill. We do not want to make the game less difficult than it is—rather the contrary—but we want to make the difficulties of such a kind that they give scope for skill in avoiding them and in getting out of them.

HINDHEAD: THE FIFTEENTH TEE.

MASSEY, CHAMPION OF FRANCE.

ONE of the best things done in recent golf was Massey's win of the French open championship with a score of 292, eleven strokes better than Tom Vardon's second score. Massey is engaged now at La Boulie, where the competition was held, and even by any of the three whom no one here seems able to beat he would be found a hard nut to crack on that course. In fact, I much doubt their beating him there. On a neutral course it would be another story, doubtless.

YORKSHIRE AMATEURS *v.* PROFESSIONALS.

Just at this point in our history, when we seem badly in want of some encouragement to restore the self-respect of the amateur, as compared with the professional, golfer, it is good to be able to note that the Yorkshire amateurs, in a team match with Yorkshire professionals (including "Herd," whom we may presume to be the famous "Sandy"), succeeded in holding their own. The match is returned as a halved one, but inasmuch as the amateurs were victorious in the singles, by six matches to four, and the professionals only redeemed the situation by winning four to two of the foursomes, which were played afterwards, we have, therefore, a right to claim the greater share of the glory for the amateurs, because the singles seem to be more testing than the foursomes. However, let us leave it at the official

figures—a halved match—and even so there is occasion for the amateurs of the biggest county in the kingdom to take credit to themselves for the result. It is, at all events, a vast improvement, from their point of view, on the result of the same match last year, when the professionals won easily; and taking it in conjunction with the really very fine performances of Mr. J. Graham and Mr. R. Maxwell in the open championship, it appears that we have not even yet reason to despair of our amateur golf. HORACE HUTCHINTON.

CADDIES AND THE SCHOOLMASTER.

A GENERATION of educational reformers has come and gone since Lord Brougham uttered his memorable words of joy and gratification: "The schoolmaster is abroad." Since then, too, the Legislature has cobbled, with less or more success, at making education laws, and, impressed with its Imperial benefit to the well-being of our race, it has made education free as well as compulsory. No ameliorative movement, indeed, in these days seems to be so popular, so much discussed in an appreciative spirit, or is so widely taken advantage of by giddy youth and sober maturity, as the promotion of education among the masses of our people. The searchlight of criticism and examination has lately been turned upon the educational qualifications of the caddie, and, as he has lately been described in some quarters as a drunken ne'er-do-weel and a loafer, so he is now found to be wholly unfamiliar with the rudiments of education. Mrs. Foard, a member of the Birkdale Education Committee, has lately been holding examinations on the links, to test the educational qualifications of the caddie, and it is with regret she reports that the young men and boys who carry the golfers' clubs are mentally in a state of the densest ignorance. When the question was put to some of the men and boys, they were unable to state the name of the capital of England.

HINDHEAD: A WELL-GUARDED GREEN.

Within the past few years it has become a favourite pastime among some sections of outside critics of the game to hold up golf and its associations to public scorn and opprobrium, and the fact that the caddie is not a promising scholar is sure to be fastened upon as one more piece of evidence of golf's deteriorating tendency. There is not the slightest reason to suppose that this was the intention of Mrs. Foard in undertaking the enquiry, and in giving the results of it, for it is obvious to any fair-minded critic that the golfer is no more responsible for the bad scholarship of his caddie than Fluellen was for the existence of two puzzling rivers, one in Monmouth and the other in Macedon. It will not do, therefore, to transfer the neglect of parental responsibilities to the shoulders of the golfer. If the boys and men on the links are ignorant of elementary knowledge concerning their own land, the grievous curse has been bequeathed to them by callous parental control. Tap any stratum in the social commonwealth, and you will find evidence of the same ignorance, and not least among boys and young men who have but lately left school. What do these lads and men know of the elementary facts of British history? What, moreover, do they care about them? Does it matter a jot to them whether the British Empire was built up by sacrifice of blood and treasure? They can tell you about the public form of race-horses, or the state of the County Cricket Championship, but many of them could not tell you anything intelligible about Empire-builders like Queen Elizabeth, Drake, Raleigh, and Frobisher, neither could they tell you whether Edinburgh was in Northumberland or Dublin in Connemara.

The truth is that ignorance and knowledge are relative; it all depends upon the purpose to which education is put. Have golfers not the dictum of a caddie for saying that in golf at least syntax and arithmetic do not count for a great deal? A St. Andrews professor at the University was taking golf lessons from one of the old caddies, and was continually lamenting his ineptitude with the clubs and his lack of progress in being able to play the game even decently. "Ah, sir, ye see," was the consolatory reply of the caddie, "onybody can teach thae laddies" (meaning the University students) "Latin and Greek; but gowff, ye ken, requires a heid." Such a caddie as that could never probably aspire to pass with any approximate success any of the modern education standards of the School Board. But he had one essential quality of success in life which modern School Boards do not and cannot teach—a marvellously shrewd knowledge of human nature of all types, and an independence of character, combined with a graphic richness of vocabulary, which the steam-roller methods of the modern educationist are more successful in repressing than in cultivating. Too much knowledge is the last thing that the caddie wishes to be burdened with, for he is the master of a knowledge which no school books can ever impart. It is, besides, a knowledge which is essential to the purposes of his calling. He knows how the game should be played in order to produce the most effective results. He can tell what kind of player you are as soon as you handle your club, and he has an accurate gauge of your temper as soon as your ball is in the "Swilcan" or in "Hell." He knows all the bad lies on the course, the best line to take to the hole, the safest club to take in an emergency, the best strategic policy to follow when you are hard pressed. His manner is kindly, sympathetic, remonstrative, encouraging, plain spoken, condemnatory all in turn; and in the exercise of these varied moods no one who has had experience of the ordeal can say that there is either a lack of natural, native intelligence or of a fine subtlety of character in resource.

The caddie as we know him to-day is, as a general rule, one of the waste products of a highly specialised civilisation. He drifts to the links because there is no other calling in life that he can adequately fulfil; he is a kind of industrial waif and stray. But it is a short-sighted view to take of a complex problem always to blame golf and golfers for the existence, as well as for the educational deficiencies, of the caddie. If he did not carry clubs he would probably become a highly non-productive charge to the ratepayers; and there are some natures so constituted that the knowledge contained in school primers can never be crammed into their heads. What is needed to be taught to-day more than ever before is the value of character, of self-reliance, of parental responsibility to children. In this light there is an element of fascination in the prospect that members of golf clubs may be able to supply the deficiencies of the schoolmaster. The varied composition of club membership, with their lawyers, doctors, travellers, engineers, authors, lairds, and stockbrokers, might usefully while away the tedium of a wet day by assembling the caddies in the neighbouring shed and lecturing to them in easily understood language about some of the primary uses of education. The majority of them, at any rate, could put the caddie quickly in possession of the name of the capital of the Empire, and the lawyers would have an enjoyable, racy, pungently annotated rhetorical exercise in expounding the rudiments of the law as it affected house burglary, while laying special emphasis on the punishments attendant upon golf club burglary and the sweeping appropriation of newly bought rubber-core balls.

THE HINDHEAD LINKS.

OUR illustrations this week relate to the picturesque course at Hindhead, near Haslemere. The club was instituted about a couple of years ago, largely through the enthusiasm of Sir A. Conan Doyle, the novelist, and many difficulties had to be overcome before golf took root here. At the beginning of July a match between Braid and Taylor was played in celebration of the opening of the links. A. J. ROBERTSON.